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1858

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O F
LIFE INSURANCE,

PUBLISHED BY THE



LIFE INSURANCE COMPANY.

OFFICE,

151 MARKET STREET, NEWARK, N.J.

AGENCY, 11 WALL STREET, New-York.

LITERARY

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1858.

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LIFE INSURANCE,

ITS NATURE, ORIGIN AND PROGRESS;

A PLAIN

EXPOSITION OF THE PRINCIPLES OF LIFE INSURANCE,

MANNER OF CALCULATING

TABLES OF PREMIUM, SOURCES OF PROFIT, ETC.

CONTAINING, ALSO,

TABLES OF MORTALITY, ANNUITIES, EXPECTATION OF LIFE, COMPOUND INTEREST AND RATES OF PREMIUM, TOGETHER WITH MUCH OTHER VALUABLE INFORMATION FOR PARTIES CONNECTED WITH THE BUSINESS OF LIFE INSURANCE AS WELL AS FOR POLICY HOLDERS.

COMPILED FROM THE BEST AUTHORITIES.

New-York:

JOHN A. GRAY, PRINTER, 18 & 18 JACOB ST.

FIRE-PROOF BUILDINGS.

1858.
THE CLERGY
SURGEON GENERAL'S OFFICE

APR 20 1900

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1851

ENTERED, according to Act of Congress, in the year One Thousand Eight Hundred and Fifty-one, by CHARLES B. NORTON, in the Clerk's Office of the District Court of the United States, for the Southern District of New York.

THE MUTUAL BENEFIT Life INSURANCE CO.

Total Accumulation
\$4,439,231.77.



261 BROAD ST. NEWARK, N.J.

Dividend of January 1, 1863
45^c AND A SPECIAL DIV^P OF 5^c MAKING
50 PER CT.

Total amount of Dividends
paid to January 1, 1863.

\$1,919,071.12

Total amount of Claims
by Death to January 1, 1863.

\$2,926,333.80

DOBSON & JORDAN, Agents.
BOSTON, MASS.

STATEMENT.

JANUARY 1st, 1863.

Balance per Statement, January 1st. 1862, \$4,109,353.45
Received for Premiums during the year

1862, \$845,706.52

Received for Interest during the year

1862, 258,249.07

Received for Annuity Bond during the
year 1862, 1,000.00

Total Receipts for 1862, . . . \$1,104,955.59

Paid Claims by Death, \$263,390.55

" Policies purchased, 169,283.75

" Salaries, Taxes, Adver-
tising, Postage, Ex-
change, &c. 42,448.45

" Commissions to Agents, .. 57,489.48

" Physicians' Fees, 6,833.36

" Sanitary Commission and
Volunteer Aid Fund, .. 4,000.00

" Annuities, 1,517.00

" Dividends, 230,114.68 \$775,077.27 \$329,878.32

Net Balance, Jan. 1, 1863, . . . \$4,439,231.77

ASSETS.

Cash on hand..... \$96,195.64

United States Securities..... 293,700.00

Bonds of the State of New Jersey.... 50,000.00

Bonds of the Cities of Albany, Troy,

Brooklyn, N. Y.; Newark, Elizabeth

City, and Union County, N. J..... 219,227.25

Real Estate..... 77,924.93

Bonds and Mortgages on Real Estate,

worth double the amount loaned... 2,365,013.56

Premium Notes—Loans on Policies in

force, drawing six per cent. interest, 1,261,666.44

Loans on Scrip 4,570.61

Annuity Bond State of Massachusetts, 800.00

Premiums in course of transmission

from Agents..... 70,132.64 \$4,439,231.77

NON-FORFEITING PLAN.

TABLE A.

Annual premiums for ten years to secure the payment of the sum assured, *in case of the party's death before the expiration of the ten years*, the premiums having been regularly paid up to the time of his death. If the insured, *being living*, fails to make all the payments, then, for a

Policy or \$1,000.

One payment will secure a policy of \$100, payable at death.

Two	"	"	"	200,	"	"
Three	"	"	"	300,	"	"
Four	"	"	"	400,	"	"
Five	"	"	"	500,	"	"
Six	"	"	"	600,	"	"
Seven	"	"	"	700,	"	"
Eight	"	"	"	800,	"	"
Nine	"	"	"	900,	"	"

The premiums paid participate in profits. (Age, nearest birthday.)

AGE.	Annual Premium for Ten Years.	AGE.	Annual Premium for Ten Years.	AGE.	Annual Premium for Ten Years.
14	\$37.42	32	\$54.30	50	\$79.72
15	38.27	33	55.39	51	82.09
16	39.05	34	56.57	52	84.59
17	39.73	35	57.81	53	87.25
18	40.52	36	59.13	54	90.06
19	41.29	37	60.50	55	93.10
20	42.09	38	61.90	56	96.36
21	42.94	39	63.35	57	99.84
22	43.85	40	64.78	58	103.46
23	44.81	41	66.11	59	106.94
24	45.82	42	67.37	60	110.18
25	46.89	43	68.62	61	112.71
26	47.98	44	69.88	62	115.34
27	49.14	45	71.21	63	117.08
28	50.30	46	72.61	64	121.05
29	51.37	47	74.09	65	124.38
30	52.38	48	75.73		
31	53.30	49	77.62		

NON-FORFEITING PLAN.

TABLE B.

Annual payments for ten years, to secure a paid-up policy for an amount corresponding to the number of payments made, payable at death. Example: for a

Policy of \$1,000.

One payment will secure a policy of \$100, payable at death.

Two	"	"	"	200,	"	"
Three	"	"	"	300,	"	"
Four	"	"	"	400,	"	"
Five	"	"	"	500,	"	"
Six	"	"	"	600,	"	"
Seven	"	"	"	700,	"	"
Eight	"	"	"	800,	"	"
Nine	"	"	"	900,	"	"

The premiums paid participate in profits. (Age, nearest birthday.)

AGE.	Annual Premium for Ten Years.	AGE.	Annual Premium for Ten Years	AGE.	Annual Premium for Ten Years.
14	\$33.34	32	\$47.67	50	\$69.62
15	34.00	33	48.62	51	71.27
16	34.67	34	49.60	52	72.89
17	35.36	35	50.58	53	74.50
18	36.07	36	51.56	54	76.08
19	36.82	37	52.59	55	77.65
20	37.59	38	53.62	56	79.19
21	38.36	39	54.67	57	80.71
22	39.14	40	55.76	58	82.21
23	39.94	41	56.87	59	83.69
24	40.75	42	58.05	60	85.16
25	41.57	43	59.28	61	86.65
26	42.38	44	60.58	62	88.17
27	43.27	45	61.94	63	89.72
28	44.08	46	63.86	64	91.30
29	44.95	47	64.85	65	92.88
30	45.83	48	66.40		
31	46.74	49	68.00		

DIRECTORS AND OFFICERS.

LEWIS C GROVER,
HENRY McFARLAN,
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Mathematician.

Vice-Pres.

JAMES STEWART, M. D.
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GABRIEL GRANT, M. D. } *Medical Advisers.*

REASONS WHY PREFERENCE

SHOULD BE GIVEN TO

The Mutual Benefit Life Insurance Co.

BY PERSONS INTENDING TO INSURE.

AGE.	<i>Annual payment for an Ins. of \$1000 for LIFE.</i>
14	\$ 15 30
15	15 60
16	16 20
17	16 50
18	16 90
19	17 30
20	17 70
21	18 20
22	18 80
23	19 30
24	19 80
25	20 40
26	21 10
27	21 70
28	22 40
29	23 10
30	23 60
31	24 30
32	25 00
33	25 70
34	26 40
35	27 50
36	28 10
37	29 00
38	30 50
39	31 10
40	32 00
41	33 10
42	34 00
43	35 10
44	36 30
45	37 30
46	38 70
47	40 10
48	41 70
49	44 90
50	46 00
51	47 50
52	49 00
53	52 40
54	54 90
55	57 80
56	60 50

It offers **SECURITY** and **ADVANTAGES** unsurpassed by any institution in this country.

It **POSSESSES MORE ASSETS, AS COMPARED WITH ITS LIABILITIES, THAN ANY OTHER COMPANY** doing business in the United States. (See report of Comptroller of New-York.)

Its **INVESTMENTS** are in First Bonds and Mortgages on Real Estate, worth more than double the amount loaned.

It **DOES NOT** make temporary loans on Collaterals.

The only **STOCKS** owned by it, are Brooklyn, Albany, Troy, and Newark City Bonds, to the amount of \$137,000.

It is **PURELY MUTUAL**; therefore, the insured get all the profits. There are **NO STOCKHOLDERS** to take any of the profits which rightfully belong to those who are insured for **LIFE**.

The business of the Company is confined **EXCLUSIVELY** to the **INSURANCE OF LIVES**.

It is **ECONOMICAL** in the management of its business.

It is **PROMPT IN THE PAYMENT OF LOSSES**.

It **ACCOMMODATES** the insured in the settlement of premiums, by allowing them to pay Annually, Semi-Annually, or Quarterly. Premiums on Policies for **LIFE**, if over \$50 per annum, may be paid one half in cash, and one half in a note bearing interest at 6 per cent per annum. The interest on premium notes is to be paid annually in cash.

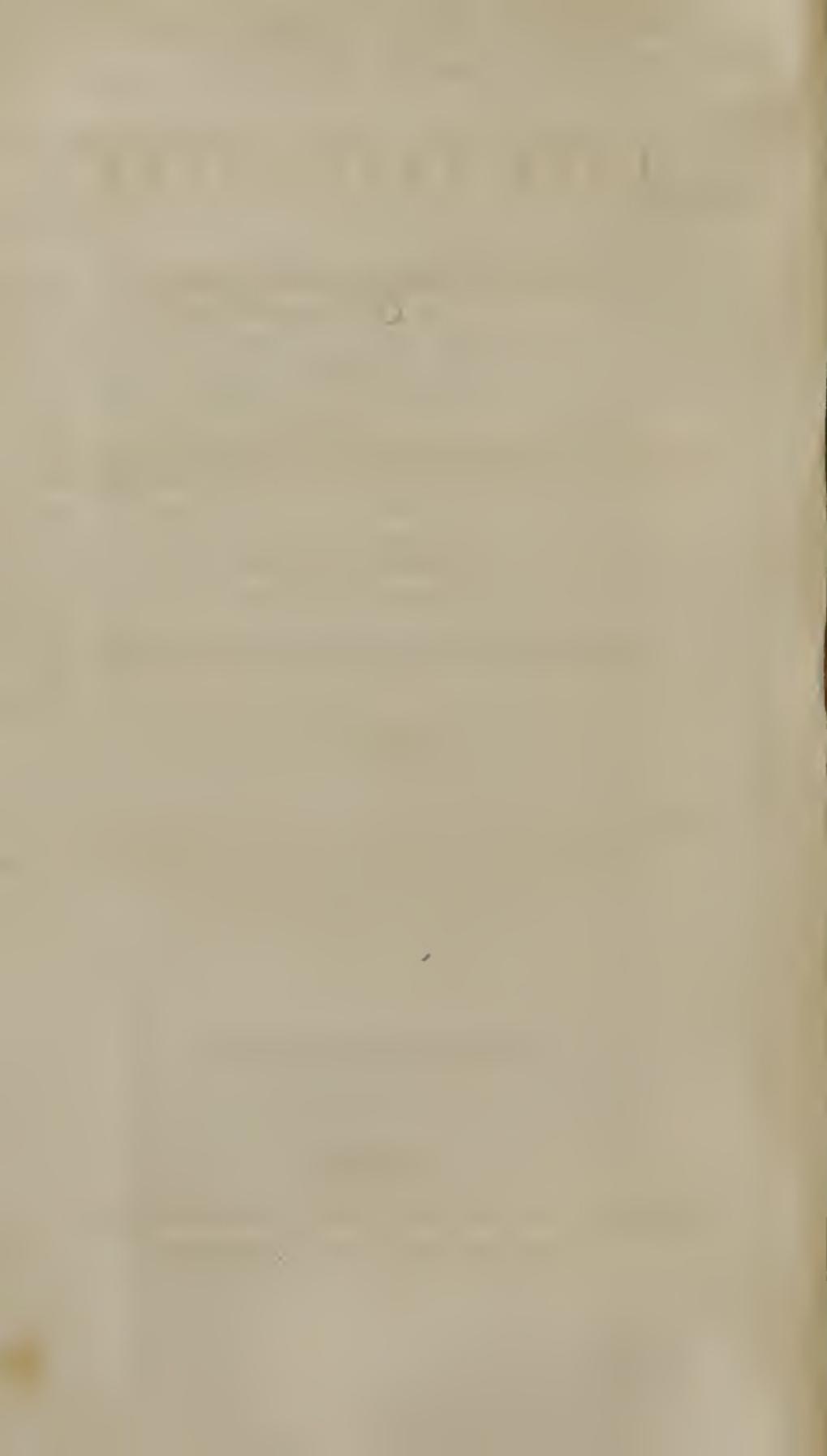
DIVIDENDS are declared **ANNUALLY** to all who have paid two **LIFE** premiums.

THE DIVIDENDS ARE PAID to aid the insured in settling future premiums. Those who pay their premiums in Cash, receive the dividends in Cash, and those who give Notes, by a credit on the Notes.

THE AFFAIRS OF THE COMPANY ARE PERIODICALLY SUBJECTED TO THE STRICTEST SCRUTINY, and the dividends declared are based upon the most accurate mathematical calculations.

Prospectuses, Statements, and Applications, will be furnished, (*without charge*), and all information desired, will be given by the officers or agents of the Company.

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INTRODUCTION.

IN consequence of having received repeated orders to import Foreign Books, treating upon the subject of LIFE INSURANCE, it occurred to the Publisher that a necessity existed for a publication at home, explanatory of the whole business of *Life Insurance*. As the subject is comparatively a new one, it must be a matter of great importance to every Life Insurance Company, that the public generally should be well informed of the uses and advantages of the system, as well as the Agents who act for them. The Work, of which the above forms the title, will be particularly adapted for the use of Agents, and for distribution by the various Companies who may feel disposed to patronize it. It is intended to give the necessary information in a plain and concise manner. Among other things, will be introduced,

articles in answer to many objections against insuring lives, brought forward and urged by those, who, from ignorance of the subject, are not able to write or judge fairly of the benefits and advantages to be derived from a well conducted system of Life Insurance. No particular plan or system of insurance will be advocated, but as stated in the title : “*A Plain Exposition of the Principles of Life Insurance,*” will be given.

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LIFE INSURANCE.

ORIGIN AND PROGRESS OF LIFE INSURANCE.

THE first public office for the insuring of lives originated with the Rev. William Anhote, D. D., of Middleton, in Lancashire, England, for the benefit of the widows of clergymen and others, and for the settling of jointures and annuities. This design was undertaken and established by the "Mercer's Company," which in 1698 settled the sum of £2,888 per annum as a security for the yearly payment of £30 during the life of any widow whose husband had, in his health, subscribed £100 to the fund ; and so in proportion for any greater or less amount. In 1699 another similar institution was formed, under the name of "The Society of Assurance for Widows and Or-

phans." In July, 1706, the first general office for this kind of security was founded by a charter from Queen Anne, and called "The Amicable Society, or Perpetual Assurance;" and it is probable that about the same period many other projects of a like nature appeared, of which no traces are now remaining.

"THE ROYAL EXCHANGE ASSURANCE COMPANY" was established by a charter dated June 20th, 1720; the original powers of which were extended by another charter, issued in the following year to the *insurance of lives* and against casualties and accidents by fire. The "LONDON ASSURANCE COMPANY" was also incorporated in 1721, in consequence of the same Act, for granting similar securities; and these appear to have been the only associations instituted for general life-insurances until the year 1762, when "THE EQUITABLE SOCIETY" was formed, in consequence of the recommendation of Professor Simpson in his lectures. Mr. James Dodson also appears to have assisted in the design, by supporting the plan, and composing some of the tables. About the same period, a number of other societies were pro-

jected and formed, under the specious pretence of being institutions "for the benefit of old age," being, however, for the most part, false in principle and mischievous in effect; but towards the conclusion of the eighteenth century and the commencement of the present, several new and valuable companies for life-insurance were founded. The following statement furnishes, perhaps, the clearest view of the advance and employment of life-insurances down to the present time: In England, from 1706 to this date, upwards of 100 life insurance companies have been founded. The first life insurance company established in the United States was the "Hospital Life Insurance Company" of Boston, which commenced its operations in the year 1825. The "New York Life and Trust Company" then followed in 1829, but the life-insurance department of their business was very limited; it will be seen that this subject is comparatively new in this country, few persons having availed themselves of its advantages prior to the year 1843, when the first mutual companies were established, under the names of the "Mutual Life Insurance Company of

New York," and the "New England Life Insurance Company of Boston." The next were the "State Mutual, of Worcester, Mass.," the "Mutual Benefit, of Newark," and the "New York Life Insurance Company," of New York City, established in 1845, since that date several other companies have been established in different sections of the country.

GENERAL PRINCIPLES OF INSURANCE.

Notwithstanding the natural weakness of the human frame, and the obvious insecurity and brevity of life, it is clear that, in the almost boundless resources of the mind of man, Providence has furnished him with a variety of intellectual devices, which, in a very great degree, compensate for those imperfections. By the improvement of the mechanical arts, the feeble strength of individuals is increased to an almost unlimited extent; and the simplification of the sciences has produced a correspondent facility and power in their acquirement. Thus, much more is done and learned, with greater effect, in less time, and with far less labor, than could

formerly have been done or learned by any then-existing means; which economy of time and strength, as it were, lengthens life, by leaving space in it for other, or more profound pursuits. In like manner, the proverbial uncertainty of life, which appears to be altogether beyond the reach of human control, is not without a consolatory remedy, at least, insomuch as relates to the prevention of that distress which the destitution of those we leave behind us adds to death, or to the occurrence of a sudden, heavy, or unexpected, calamity. It seems, therefore, highly probable that mankind were subjected to infirmity, shortness of life, and continual mutability, partly for the purpose of inducing the unceasing exertion of the counter-acting powers of ingenuity and prudence; in the diligent improvement of which consists one of the greatest moral benefits of the most highly-cultivated conditions of society.

It is not intended here to enter into any further explanation of the advantages to be derived from this continual improvement, or to enforce any of the ordinary rules of prudence; but only to exhibit the qualities and importance of that

branch of it, which relates to the *securing of a safe termination to an uncertain event*, as far as that object is to be effected by the means of LIFE-INSURANCES. The nature and design of these contracts not being either generally or accurately understood, prevents their very great value being duly appreciated ; but it will be found, when the principles upon which they are founded are rightly comprehended, that it is impossible to entertain too high an estimation of their *utility*, or to conceive too wide an extent for their application. Their vital principle is future security ; and their chief employment, at present, is to secure a provision for those who depend upon some particular individual for support, whenever their protector shall be removed by death. For though, in a multitude of instances, the first burst of sorrow is far too deep and violent to admit of any other feeling than that of anguish, yet it cannot be doubted that even such distress is soon rendered more acute, when the survivors reflect that they are left in the world destitute as well as friendless ; and calamity is always most afflicting, when the dis-

traction of grief is harassed by the anxieties and privations of want.

As the present treatise is intended to afford the fullest information upon the subject in the plainest terms, perhaps the first point to be made clear, is the way in which the issue of an event depending upon the inscrutable will of Providence, *can* be ascertained by a human being, with any probability of being correct in the result. The chance of the duration of life, in single instances, is of very great uncertainty ; but as all human knowledge is extremely limited, when it attempts to institute a minuteness of inquiry, the calculation can only be made upon a very wide and general view of the occurrence of such destruction, within a certain time and space. When this view is sufficiently extensive, even those events which are considered and called purely accidental and fortuitous, are discovered to have certain relations and to be governed by certain laws. Thus, the number of births, marriages, and deaths ; the relative proportions of the sexes, are, under similar circumstances, found to be nearly equal during equal periods of time : whence it is easy, from

observations made upon them, to determine the amount which an individual should pay for the securing of a certain sum to be paid to his surviving relatives at his death.

TABLES OF MORTALITY.

AN estimate of the average duration of human life, at all ages, is formed from observations among large masses of mankind during an extended period of time; such observations constituting the materials, or *data*, necessary for constructing what are technically termed *Tables of Mortality*. A right understanding of the construction and use of these tables constitutes a most important part of an accurate notion of the nature and benefits of life-insurance; a particular explanation of them shall, therefore, now be given, as naturally following the preceding notices of the principles of chances, and as the first elementary point of information connected with the actual subject of these pages.

The first table of mortality, which had any pretensions to accuracy and utility, was deduced from a series of five annual tables of

births and deaths, with the ages and sexes distinguished, kept for the years 1687, 1688, 1689, 1690, and 1691, by Dr. Neumann, in the city of Breslau, in Silesia. These, however, omitted to state the entire number of the population; but the place itself was considered at the time to afford a fair standard of ordinary mortality, on account of the uniformity in numbers and seclusion of the inhabitants, who, being chiefly engaged in the linen manufacture, were visited by few strangers, and remained resident on the same spot for one generation after another. From these registers, Dr. EDMUND HALLEY constructed the first tolerably correct table for ascertaining the true values of life-annuities, which had been previously calculated from hypothetical and uncertain data. He assumed, from his examination, that the advances of birth and death are equal and uniform, which, however, was soon discovered to be erroneous; but his tables and rules will nevertheless be sufficient to make the reader acquainted with a few very simple calculations, illustrating the relative duration of life and its consequent value.

Considerable improvement was made by sev-

eral parties, subsequent to this period, up to the time of the construction of the Northampton Tables, by Dr. Price, in 1769. About the year 1800, a set of Swedish Tables was published, founded on returns, both of the number living and of the deaths in Sweden and Finland for 20 years, ending with 1795.

The Carlisle Table, which is the one now most in use, in England and this country, for the calculation of life-insurance premiums, was constructed by Mr. Joshua Milne, from observations made by Dr. Heysham, at Carlisle, England, during a period of nine years, ending in 1787.

The best actuaries in England and this country, concur in opinion as to the decided superiority of the CARLISLE over the NORTHAMPTON tables of Mortality, and it is generally conceded that these tables more closely exhibit the state of longevity as it exists in the *Northern and Eastern States* than any of the others.

TABLE OF MORTALITY.

17

TABLES OF MORTALITY, showing the number of persons living at the end of every year out of 1000 born at the same time; as calculated by the different authors for the several places already stated.

Age.	Breslau, Dr. Halley.	Northamp- ton. Dr. Price.	Carlisle, Dr. Hey- sham.	Sweden, Dr. War- gentin.	Age.	Breslau, Dr. Halley.	Northamp- ton. Dr. Price.	Carlisle, Dr. Hey- sham.	Sweden, Dr. War- gentin.
0	1000	1000	1000	1000	51	259	238	434	376
1	769	743	846	780	52	250	231	428	367
2	658	625	778	730	53	241	224	421	358
3	614	582	727	695	54	232	217	414	349
4	585	553	700	671	55	224	210	407	340
5	563	536	680	656	56	216	203	400	331
6	546	521	668	644	57	209	196	392	322
7	532	509	659	634	58	201	189	384	312
8	523	499	654	625	59	193	182	375	303
9	515	492	649	618	60	186	175	364	293
10	508	487	646	611	61	178	168	352	282
11	502	483	643	606	62	170	161	340	271
12	497	478	640	602	63	163	154	327	259
13	492	474	637	597	64	155	147	314	247
14	488	470	633	594	65	147	140	302	235
15	483	465	630	590	66	140	133	289	224
16	479	461	626	586	67	132	126	277	212
17	474	457	622	582	68	124	119	265	200
18	470	452	618	578	69	117	113	252	187
19	465	446	613	574	70	109	106	240	175
20	461	441	609	570	71	101	99	228	162
21	456	434	605	565	72	93	92	214	149
22	451	428	600	560	73	84	85	200	135
23	446	421	596	555	74	77	78	184	121
24	441	415	592	551	75	69	71	167	108
25	436	409	588	546	76	61	65	151	96
26	431	402	584	541	77	53	58	136	85
27	426	396	579	535	78	45	52	121	74
28	421	389	575	530	79	38	46	108	65
29	415	383	570	525	80	32	40	95	56
30	409	376	564	519	81	26	35	84	47
31	403	370	558	513	82	22	30	72	38
32	397	364	553	507	83	18	25	62	31
33	391	357	547	501	84	15	20	53	24
34	384	351	542	495	85	12	16	44	19
35	377	344	536	488	86	9	12	37	14
36	370	338	531	482	87	6	9	30	11
37	363	331	525	477	88	4	7	23	8
38	356	325	519	471	89	2	5	16	6
39	349	318	514	465	90	1	4	14	5
40	342	312	507	459	91	0	3	10	3
41	335	305	501	453	92	0	2	7	2
42	328	299	494	445	93	0	1	5	1
43	321	292	487	437	94	0	1	4	0
44	314	285	480	430	95	0	0	3	0
45	307	279	473	422	96	0	0	2	0
46	299	272	466	414	97	0	0	1	0
47	291	265	459	407	98	0	0	1	0
48	283	259	452	400	99	0	0	1	0
49	275	252	446	392	100	0	0	1	0
50	267	245	440	385	101	0	0	0	0
					102	0	0	0	0
					103	0	0	0	0

COMPARATIVE EXPECTATIONS OF LIFE.

Showing the Expectation or Average duration of life, deduced from Original Tables, prepared under the superintendence of a committee of eminent Actuaries in England, and compared with the Carlisle, Equitable, and Northampton Tables.

Completed Age.	Male Lives-- Town, Country and Irish Experience.	Female Lives-- Town, Country and Irish Experience.	General Experience.	Adjusted Experience.	Carlisle Experience.	Equitable Experience.	North- amp- ton. Expe- rience.
20	39.84	35.86	40.97	41.49	41.46	41.06	33.43
21	39.29	36.01	40.45	40.79	40.75	40.33	32.90
22	38.70	36.20	39.92	40.09	40.04	39.60	32.39
23	37.98	35.41	39.18	39.39	39.31	38.88	31.88
24	37.41	34.81	38.54	38.68	38.59	38.16	31.36
25	36.63	34.41	37.84	37.98	37.86	37.44	30.85
26	35.88	33.79	37.13	37.27	37.14	36.73	30.33
27	35.23	33.14	36.42	36.56	36.41	36.02	29.82
28	34.63	33.07	35.76	35.86	35.69	35.33	29.30
29	33.96	32.61	35.06	35.15	35.00	34.65	28.79
30	33.17	31.73	34.25	34.43	34.34	33.98	28.27
31	32.44	31.04	33.50	33.72	33.68	33.30	27.76
32	31.73	30.51	32.75	33.01	33.03	32.64	27.24
33	30.92	29.86	31.98	32.30	32.36	31.98	26.72
34	30.21	29.60	31.27	31.58	31.68	31.32	26.20
35	29.52	29.07	30.55	30.87	31.00	30.66	25.68
36	28.87	28.88	29.90	30.15	30.32	30.01	25.16
37	28.15	28.30	29.20	29.44	29.64	29.35	24.64
38	27.49	27.62	28.51	28.72	28.96	28.70	24.12
39	26.81	27.00	27.79	28.00	28.28	28.05	23.60
40	26.06	26.36	27.07	27.28	27.61	27.40	23.08
41	25.42	25.84	26.41	26.56	26.97	26.74	22.56
42	24.70	25.34	25.68	25.84	26.34	26.07	22.04
43	24.00	24.57	24.98	25.12	25.71	25.40	21.54
44	23.34	23.94	24.26	24.40	25.09	24.75	21.03
45	22.63	23.21	23.55	23.69	24.46	24.10	20.52
46	21.98	22.60	22.85	22.97	23.82	23.44	20.02
47	21.24	21.97	22.12	22.27	23.17	22.78	19.51
48	20.62	21.16	21.41	21.56	22.50	22.12	19.00
49	20.08	20.69	20.79	20.87	21.81	21.47	18.49

TABLES OF MORTALITY.

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COMPARATIVE EXPECTATIONS OF LIFE.—(CONTINUED.)

Completed Age.	<i>Male Lives— Town, Country and Irish Experience.</i>	<i>Female Lives— Town, Country and Irish Experience.</i>	General Experience.	Adjusted Experience.	Carlisle Experience.	Equitable Experience.	Northampton Experience.
50	19.41	20.05	20.11	20.18	21.11	20.83	17.99
51	18.73	19.46	19.46	19.50	20.39	20.20	17.50
52	18.05	18.80	18.79	18.82	19.68	19.59	17.02
53	17.40	18.31	18.16	18.16	18.97	19.00	16.54
54	16.77	17.58	17.50	17.50	18.28	18.43	16.06
55	16.21	16.78	16.83	16.86	17.58	17.85	15.58
56	15.66	16.07	16.23	16.22	16.89	17.28	15.10
57	15.09	15.39	15.62	15.59	16.21	16.71	14.63
58	14.45	14.79	14.98	14.97	15.55	16.15	14.15
59	13.99	14.28	14.38	14.37	14.92	15.60	13.68
60	13.47	13.78	13.81	13.77	14.34	15.06	13.21
61	12.99	13.10	13.24	13.18	13.82	14.51	12.75
62	12.46	12.41	12.68	12.61	13.31	13.96	12.28
63	11.90	11.87	12.09	12.05	12.81	13.42	11.81
64	11.27	11.09	11.50	11.51	12.30	12.88	11.35
65	10.87	10.60	11.03	10.97	11.79	12.35	10.88
66	10.38	10.00	10.51	10.46	11.27	11.83	10.42
67	9.93	9.56	10.03	9.96	10.75	11.32	9.96
68	9.33	8.85	9.46	9.47	10.23	10.82	9.50
69	8.81	8.38	8.99	9.00	9.70	10.32	9.05
70	8.34	7.93	8.50	8.54	9.18	9.84	8.60
71	6.88	7.31	8.13	8.10	8.65	9.36	8.17
72	7.43	6.63	7.72	7.67	8.16	8.88	7.74
73	6.97	6.19	7.26	7.26	7.72	8.42	7.33
74	6.57	5.72	6.84	6.86	7.33	7.97	6.92
75	6.03	5.37	6.46	6.48	7.01	7.52	6.54
76	5.63	5.45	6.08	6.11	6.69	7.08	6.18
77	5.48	4.78	5.77	5.76	6.40	6.64	5.83
78	5.16	4.56	5.37	5.42	6.12	6.20	5.48
79	4.99	4.80	5.07	5.09	5.80	5.78	5.11
80	4.75	4.75	4.75	4.78	5.51	5.38	4.75

MANNER OF CALCULATING PREMIUMS OF INSURANCE FROM TABLES OF MORTALITY.

THE premium of insurance is either a single sum paid down when the life is insured, or a sum paid at that time, with an engagement to pay the like sum annually until the death of the life insured ; the latter mode of payment is in more general use at the present time, as being more generally convenient. After a table of the decrements of human life has been formed, a series of calculations is made from it to fix the amount of annual or other premiums ; estimating money at such a rate of interest as will be likely to benefit the insurance company. These premiums should bear a fair proportion to the various sums to be returned, and the chances of life at the different ages at which persons become insured. If money did not bear interest, then the present payment for a sum insured on life, should be exactly equal to the amount to be ultimately returned, exclusive of all incidental

expenses in making the policy, &c.; but as money is capable of increase in course of time by interest, an equal sum paid on effecting the policy will be greater than the real value of the future payment; for money to any amount will double itself in eighteen years at compound interest at the rate of 4 per cent. per annum. The table of premiums is therefore derived from the table of mortality by strict mathematical calculation, with due regard to the value of money, in a very ingenious manner; the process of which is thus described. Suppose the premium which is payable in one sum on the life of a person of a given age be known, then the premium payable in like manner on the life of a person one year younger, which is compounded of the premium for one year, and the present value of the premium so known can be easily calculated from the table of mortality thus:—multiply the premium on the older life into the number living at that age, (according to the table,) and divide by the number living at the younger age. This sum discounted for a year gives the premium which would be payable at the end of the year. Then multiply the

sum to be insured into the number of persons of the younger age who, according to the tables, die in a year, and divide by the number of persons alive at that age : the sum, discounted for a year, is the premium of insurance for the first year ; and the two sums added together, give the whole amount of the desired premium. Now, as a person of the greatest age in the table must die in the ensuing year, the premium in his case is evidently the sum to be paid discounted for one year, and thence the premium for the age next below the oldest age is ascertained by the above rule ; and so for every age in succession. In this process no error can be committed without detection, as every step may be checked by a similar table showing the value of an annuity at every age. The preceding rules give a table of rates for the payment of a single premium only ; but as it is generally more convenient for the insured to pay an equivalent annual sum, a table of such rates is made by dividing the single premium for each age by the value of an annuity of \$1 at that age, increased by unity on the premium for one year. If the annual premium were to be paid at the *end* of

the year, such an addition would not be required; but a policy is not granted until one premium is paid, and therefore the reason for the addition is evident. In order to give an advantage to the insurance offices, the rate of interest is generally assumed to be 4 per cent. per annum, which may probably be fair upon an extensive averaged period.

ILLUSTRATION OF THE PROFIT AND LOSS OF LIFE INSURANCES.

IT is evident, however, that even after the most accurate calculations, both of the probabilities of life and the value of money, insurers can avoid loss only by having due regard to the governing principle, or fundamental law of chances, and the generalizing effect, or average produced by an extensive connection. This may be more particularly explained by an instance taken by Mr. MacCulloch from the Carlisle table. In that table the average future life of a person aged thirty years, is estimated at thirty-four years and four months. Such insurers, then, as follow the Carlisle table as a guide, would assume this remainder of life for a

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person thirty years of age, and would calculate accordingly the value of a sum of money to be paid at his death. If he *died before* that time, the insurers would *lose* by the engagement ; and if he *outlived* it, they would proportionably gain. If, however, their business were sufficiently extensive to allow of the full effect of average, the general law affecting human life would necessarily prevail with reference to the whole of their transactions, and the losses by premature death would be counterbalanced by the payments received from those whose lives are extraordinarily prolonged beyond the period calculated by the tables. The profits of the insurers would thus be rendered wholly independent of chance ; this generalizing average forming the fair and legitimate source of gain to an office for the insurance of lives.

SOURCES OF PROFIT AND SURPLUS.

It has been already shown that the premiums for life insurance are computed from established tables of mortality; and it is therefore evident that unless the decease of individuals insured in an office take place exactly in the proportion exhibited by those tables, there will be a deficiency or surplus of capital for the payment of the sums insured, according as the real deaths exceed or fall short of the assumed standard. In the former case, a portion of the subscribed capital must be appropriated to supply the deficiency, and if there be no subscribed capital, (as in mutual insurance companies,) a call must be made upon the members for the same purpose. In the latter case there will be a profit or surplus fund to be divided, but the disposal of this surplus differs according to the principles or systems on which the various companies for life insurance are founded. Thus the office either appropriates the whole of the surplus to itself, as in the case of stock com-

panies, or makes a compensation to the insured for it, as in those companies which allow a participation of the profits to the policy-holders, the first paying only the sum mentioned in the policy, and the latter adding certain proportions to that sum, or making deductions from the future annual premiums.

It has been considered that the surplus or profits produced from the accumulation of premiums paid above the amount of the claims returned, may become great from the following several causes:—1. That proportion of profits which would be assigned to the policies of persons not yet qualified to participate in them. 2. The sums periodically retained in a society out of discontinued or forfeited policies, which never become claims; though this has almost entirely ceased to be a source of profit. 3. The higher rate of interest realized beyond that by which the table of premiums was computed; and, 4. A larger average duration of life among the insured than that assigned in the table of mortality adopted by the office; in other words, the excess of the premium above the true value of the risk incurred. In the latter particular,

of course the greatest caution is required, by the selection of the best lives, which will answer the purpose both by securing an office from imposition, and of increasing its profit; for in companies which are purely stock, a party may sometimes pay to the office a sum far greater than his representatives will receive in return.

VALUE AND SALE OF POLICIES.

IT is evident that the value of a policy is equal to the excess of the present value of the expected sum to be paid after the extinction of the life insured, above the product of the annual premium multiplied into the number of years' purchase at which an annuity on such a life is then estimated. It follows, therefore, in consequence of the continual increase of the value of the reversion, and the continual decrease in the number of years' purchase which an annuity on the life is worth, as such life grows older, that the above excess must continually become greater, or, in other words, that the policy must every year become more valuable. As a policy

is assignable property, it often becomes a means by which money is raised by mortgage or sale of it; but to make the assignment effectual in cases of bankruptcy, or insolvency, it is essential that notice of the assignment should be given to the office. In cases of purchase, the holder, or buyer, pays all the future premiums: his advantage being in the possession of such a policy, at a premium less than he must have paid for it at the existing age of the party upon whose life it was granted. Supposing, for instance, a policy to have been effected for the payment of \$5,000 upon the death of a person aged 38, when the insurance was made, and that it was sold when he was 50; the buyer would then have to pay only \$152. 50 annually, the premium for the former age; whereas, if the life were to be insured at the latter age, the premium would \$230. For the difference between these two annual payments, therefore, namely, \$77.50, an equitable price should be paid.

Besides the *public sale* of these securities, they may also be disposed of to the office by which they were issued; since most of the in-

surance companies are willing to receive their own policies again at a fair price, after the premiums have been paid for a certain number of years: thus redeeming from the insured, the responsibility incurred by the contract; which transaction is called the surrender of a policy. The prices offered, are, however, generally regarded by the parties surrendering, as very low, which arises partly from their not making a due allowance for the risk already incurred by the company; and for which it ought certainly to be remunerated. It will thus happen, that a person who has been paying an annual premium of \$50, for ten years, is surprised at the small sum offered to him for a policy which has cost him \$500; but it must be remembered, that during that space of time, the society has been exposed to the risk of death, which, had it occurred, the society would have suffered a loss of perhaps \$2,000, or must have sustained its regular proportion of losses according to the Tables of Mortality.

ACCOUNT OF DIFFERENT KINDS OF LIFE- INSURANCE COMPANIES.

THE companies for life-insurance are generally divided into three classes, and styled conformably to the principles or systems upon which they are founded, Stock companies, MUTUAL INSURANCE companies, and MIXED companies. Most of these institutions are intended for insurances on the lives of persons of all ranks and professions; but there are also some companies which have been established in England for insuring the lives of particular classes of persons, as of clergymen, school-masters, medical practitioners, officers in the army, &c., the support of whose families is dependent upon their lives, and who thereby secure sums to their widows or their families. In all these companies calculations are made according to a general table of mortality, modified by the peculiar circumstance of each profession. In some of them the premium remains the same, whilst the sum insured increases with the number of years during which the premium has

been paid. We shall now notice separately each of the three classes of insurance companies above-mentioned.

STOCK COMPANIES.

COMPANIES of this kind are formed by parties who raise a capital, which is considered a guarantee of any policies they may issue. In some companies the stockholders are liable for *any* deficiency of funds even beyond the amount of capital paid in, while in others, the liability extends only to the amount of capital owned. The insured are guaranteed the amount of the policy taken, but are not allowed participation in any profits arising out of the business, that, being reserved for the stockholders alone. Many of the stock companies have adopted the tables of premiums mostly used by mutual companies; some, however, have reduced these rates 10 or 15 per cent., considering this reduction, together with the guarantee of a paid-up capital, as equivalent to a membership in a mutual company.

MUTUAL INSURANCE COMPANIES.

MUTUAL companies are owned and managed by policy holders, and the capital is the result entirely of the contributions, by premiums, of the members. The leading feature of a mutual company is *accumulation*, which enables it to sustain and perpetuate itself, and to pay large sums in the future to the heirs of every contributor. The first resource of a company of this kind, is the premium derived from the issue of its first policies, and does not require that a co-partnership be formed by shareholders, as in stock companies, with whom to divide any profits that may arise from the business; but being an association composed entirely of persons interested in the legitimate benefits, their affairs are so ordered and conducted that equality predominates in every department, and especially as respects its premiums, privileges and profits.

Institutions of this kind, properly conducted, are not at variance with stability, as the experience of many offices in Europe has demonstrated

As premiums are always required in advance, if they are calculated for the whole term of life, the total of these premiums will amount to more than double the sum required to pay all claims for several years; the annual premium for *life*, being on an average, twice the rate required for *one year*. Now, as it is improbable that any combination of adverse circumstances could produce a *larger* amount of losses than *twice* the *probable* amount, as is shown by the tables, the accumulation of funds from premiums MUST be always sufficient to provide for all loses and expenses of an office, well conducted and carefully managed. Most of the companies here, have adopted tables of premiums constructed from the Carlisle tables of mortality, at an interest of four per cent., to which has been added a certain per centage to guard against any contingency, and to provide for the expenses of the business; this is wise, for the ruinous effects of too low premiums will be many years developing themselves, owing to the continual acquisition of new members.

In mutual companies in the United States, the party insuring is responsible for the amount

of his annual premium, and for that only so long as he may decide to remain a member; provision is made for the withdrawal, upon equitable terms, of any who may desire to do so. At stated periods a mathematical valuation of all policies is made, and the entire surplus is divided among the members entitled to participate, in such manner as is in accordance with the established plan of business of each company. The different modes of division now in practice, will be the subject of a future article.

MIXED INSURANCE COMPANIES.

THESE companies, as is shown by the name, are a combination of Stock and Mutual companies; Stock, by having a capital paid in; and Mutual, by allowing the policy holders a certain participation in all dividends declared.

Companies of this kind are not numerous in this country. Two or three have recently been established, among which are, the "United States," of New York, and the "Manhattan," also of New York.

CAPITAL OF LIFE-INSURANCE COMPANIES.

A very erroneous impression has become very general in regard to the large published capital of many of the English companies doing business in this country. The capital is *not all actually paid up*, but the proprietors engage to raise, if it should be required, the amount published as *capital*. In general, but little more than 10 per cent. is paid up.

The real use of the subscribed capital is to show the stability of those by whom the company has been founded, and give security to such as propose to become assured in it; as well as to equalize those fluctuations to which assurance offices are liable, and which must be expected from time to time to occur. These, however, are in general so inconsiderable, that the common variations in the rate of mortality require but little, if any capital to meet them; for a disposable fund is constantly arising from the payment of the premiums, which will continue

to increase by the interest accruing upon it, even after deducting the claims arising from an average number of deaths, until the sum arising from a diminished number of contributors would exactly pay off the yearly claimants.

MANNER AND TIME OF MAKING DIVIDENDS.

THERE are very many different plans of division of profits, all of which have their advantages, the insured must be the judge as to which is the *best* to suit his or her individual case.

In Stock companies under the plan of operations, adopted many years ago, the business was conducted for the sole profit of the stock subscribers, but, at this time, many such companies have modified their plan of business, so as to allow the *insured* to participate in the profits to the extent of fifty, sixty, and even eighty per cent, of the *declared dividends*. A number of offices have of late been put in operation precisely upon this plan. In Mutual Companies, quite a variety of systems are in vogue as to the manner and time of division of profits among the insured; *life* policies in general are the

only ones allowed to participate, they being in fact the guarantors of the short policies. The different methods are—the “Bonus, or addition dividend”—in which they are declared at certain periods, and the amounts are credited to the insured; this remains with the company until the death of the insured takes place, when it is paid to the proper parties, together with the amount of policy. In this case the *prospective* value of the present amount of profits is calculated. Another method is—“The cash dividend,” or what is nearly equivalent to that, a dividend which is paid off soon after the declaration, or used by the insured in the reduction of their annual premiums. Another is—“The Funded Dividend,” which is declared without a stipulated time of payment, but which bears interest payable annually; in the course of years the accumulation of interest, makes quite an important reduction in the annual premium; in the two last mentioned methods of division, the *present* value of the actual profits is determined by a rigid mathematical valuation of the claims and liabilities upon the policies issued by the company.

As to the *time* of making dividends, they are sometimes made annually, and at intervals of three, five, and seven years,—the reason assigned for the longest period is, that the calculations required for ascertaining the value of the liabilities is attended with a great deal of labor and difficulty. But it is maintained by some, based upon the experience of companies in Europe, an *annual dividend* can be made with sufficient correctness, by assuming the *average of former years*, even if it was impossible to go through with an accurate examination yearly.

MANNER OF EFFECTING LIFE-INSURANCES.

SOME of the most important principles on which insurances upon life are founded, having been now laid before the reader, the next branch of the subject that naturally suggests itself is, the usual order and manner of proceeding to effect an insurance.

The following is the *general mode*, but there are some *peculiarities* in the usages of most of the offices among us.

Application for Insurance.

THE first act of a person wishing to effect an insurance is, to fill up a printed form called an application, with his name, age, date of birth, residence, occupation, amount, and term of insurance,—and certain particulars relating to his health, as to whether he is subject to any disorder tending to shorten life, &c. This document is signed by the party whose life is to be insured. Reference is required to an intimate friend of the party, and also to his usual medical attendant. After the above named papers are completed, the party then goes before the physician employed by the company, called the *medical examiner*, who examines him by interrogations, and by a stethoscopic examination of the character of the respiratory organs, and the heart's action—and records the rate and other qualities of the pulse. The examination of females is usually conducted at their own houses.

In addition to these precautions, every policy of insurance contains a clause to the effect, that if any untrue statement be contained in the proposal or declaration, relative to the age, state

of health, or other circumstances affecting the life insured, the policy shall become void, and all the moneys paid on account thereof forfeited. To this clause, as far as the state of health of the insured is concerned, there can be no possible objection. The company contracts to pay the sum insured, in consideration of a given annual or other premium, and on condition of there being no misrepresentation in regard to the state of health of the insured.

If the party is accepted by the office, the policy is then made out, dating from the day of acceptance—the annual premium being payable each year upon that date.

Payment of the Future or Renewal Premiums.

BEFORE the future premiums payable on a policy of insurance become due, a notice is sent to the holder, apprising him of the fact, and informing him, that in the event of the premium not being paid within a specified time, the policy will become absolutely void. The time allowed for the payment of renewal premiums,

after they become due, is generally thirty days : the party, however, takes this time at his *own risk*, for if he dies or becomes in unsound health in the meantime, his policy is null, because he has not complied with the requisition of the policy ; the importance of this privilege can be explained in a few words ; suppose a person insured at the age of 40 for \$5,000—premium \$160—and upon arriving at the age of 50, by some neglect or omission he passes by the time when his premium should have been paid ; now the time allowed by the company is of great importance to this person, who, if he had to insure at the latter age, would have to pay \$230, —being \$70 more per annum. All offices upon renewing a policy after the specified time of payment, require evidence of the good health of the insured.

Companies are no more *legally* bound to send notices of expiration, than banks are of the time notes are due, yet companies in general, as a matter of courtesy, adopt the plan of sending notices prior to the time the premium will be due

Proof of Death of the Insured.

WHENEVER death takes place, all the information relating to the death of the insured, should be sent, as soon as possible, to the office by whom the policy was issued.

The proofs required are usually—

The “*Physician’s certificate*,” who attends him in his last illness ; this should state clearly the cause of death and all other information of importance connected with the illness of the party ; the “*Clergyman’s certificate*,” who attended the funeral in his ministerial capacity, and the “*Undertaker’s certificate*,” who performed the last offices of burial upon the body of the deceased. The identification of the deceased as the party insured is also required.

If a party dies by some sudden accident, the evidence of some person, or persons, as witnesses of the same would then be required, together with the coroner’s certificate. The cause of death must always be distinctly stated, as the policy would be void, if the decease took place by suicide, duelling, or the hands of justice, all

of which are excepted in most policies. All certificates are required to be sworn to before a magistrate, or other person authorized to take an affidavit. When circumstances occur where these forms cannot be observed, the best testimony available should be furnished.

PAYMENT OF AMOUNT INSURED.

IN the time between the death of the insured and the time appointed for the payment of the claim, due investigation into the truth of the various certificates is made, and if the whole have been found satisfactory, the claimant, at the appointed time, upon presenting his policy to the proper officers, and receipting for the money claimed, will at once be paid.

Most of the companies agree to pay their losses in sixty or ninety days after satisfactory proofs have been handed in.

In some offices, the amount claimed may be received immediately after satisfactory proof has been furnished, upon allowing the usual rate of discount for the unexpired time.

The following remarks were prepared by an experienced examiner in New York:—

MEDICAL EXAMINATIONS.

BY AN EXPERIENCED EXAMINER.

UNTIL the establishment of the present practice of appointing a medical officer to look after the interests of a life-insurance company, great uncertainty existed in relation to the insurability of many lives that were taken as good risks. This uncertainty became often the cause of protracted litigation; and the opinions of learned jurists on the bench, and the decisions of juries were not unfrequently founded upon imperfectly ascertained facts, and loose and careless opinions supplied by an agent or broker: such as, "he believed it to be a good life," or that, "the party was in a reasonably good state of health," and a host of similarly expressed opinions—as vague as they were unsatisfactory.* Often these would arise from positive

* Stackpole v. Simon. Sitt. at Guildhall Hall. Vac. 1779
Ross v. Bradshaw, 1. Blac. Rep. 312.

ignorance, at other times, from collusion or carelessness on the part of one who was represented as being the usual medical attendant of the party whose life was proposed to be insured.*

A remarkable instance of the effect of an absence of a personal examination by an officer of a company, occurred in England in the year 1824. The Duke of Saxe Wiemar insured his life for £5,000 sterling, and died in a year or two after effecting the insurance. After the amount of the policy had been paid, it was ascertained that he had been wounded in the spine, and that he was both idiotic and paralytic at the time of effecting the insurance, but had furnished the office with two certificates, one from a physician and another from a surgeon, stating that he was at that time in sound health: on which certificates the policy was issued. In a suit to recover the money paid, the company was non-suited, as the transaction was in accordance with their method of business. Had there been a medical examiner at-

* Aveson v. Lord Kincaird and others, 6 East, 188.

tached to the company, a policy on such a life never would have been issued.

The certificate of the usual medical attendant is often of little importance beyond furnishing information as to the past state of health of the party, or as to his family predisposition, for the simple reason that he may never have had an opportunity of investigating the condition of his patient in the mode needed for life-insurance. The writer has known instances of physicians giving certificates of good health, and upon having their attention directed to the results of a physical examination, frankly acknowledge that they were ignorant until that time of any predisposition to disease in their patients. An instance worthy of note occurred to the writer where the physician had been an intimate friend of the applicant for twenty years, during which time he had not experienced any indisposition, but had always had the appearance of ruddy health. An examination of the chest detected unequivocal symptoms of the existence of incipient phthisis. The attention of the medical friend, who had accompanied him to the office, was directed to them; he at once

admitted the accuracy of the diagnosis, and acknowledged that the case was not an insurable one. He subsequently reported that this individual had, about six months after his examination, suffered from severe pulmonary haemorrhage with every prospect of phthisis. Other instances could be given where the parties died of the same disease—the predisposition being unsuspected by the physician solely from his not having had occasion to investigate the condition of his patient with reference to pulmonary diseases.

The experience of the London Equitable Insurance Company furnishes some very striking facts in illustration of the importance of a personal examination by an officer of the company. At an early period of their business, when the deaths amounted to 331, those caused by consumption were 122, at the rate of 7.7 per thousand. In the year 1832, the total number of deaths was 4,095; while the number from consumption was 339. In the first period the applications were very carelessly investigated, while during a part of the last mentioned period a careful personal examination was made by a

suitably qualified person appointed by the office.

It has happened also that persons have presented themselves for examination who never have had any medical attendant, and who never suspected the existence of any disease in themselves, and yet have given evidence of such a state of system, that there existed no reasonable presumption that they would ever reach the period of their "expectation." An early death has proved the accuracy of this opinion in many an instance. It was formerly required of the party, in case he had no physician, to procure a certificate from "some other" medical man; but it is evident that but little information of value could be obtained from such a source. The medical officer appointed by the company supplies now any deficiency in the medical testimony, and offers the best security both for the insured and the insurers—to the former as furnishing to a certain extent a warranty, and to the latter a security that every means has been used to obtain none but good risks.

When a person applies for examination he should bring with him, 1st, a declaration signed

by himself; 2d, another signed by a friend; and 3d, one from his medical attendant; all giving an accurate statement of his health. These documents are furnished in blank by the company. An error has arisen on the part of some medical gentlemen in supposing that when they fill up the blank that is intended for them, that they are furnishing the information they impart, at the request of the company. This mistake has doubtless arisen from a common practice of the officers and agents, who, in wishing to save the applicant a little trouble, send the blank certificate to the physician; the latter supposing it to come from the company are in some instances unwilling to furnish the required information without a fee. All these documents, however, being the proofs which the applicant is required to supply and to bring with him to be filed in the office, must be obtained by him at his own expense. In addition to these evidences, the agent is supposed to become to some extent responsible, and in one company at least, he is required to fill up an official certificate embracing his knowledge of

the party, and his opinion as to the safety of the risk in question.

In no case should a person be examined unless all these papers are submitted, complete, to the medical examiner; for they might contain some important fact necessary to a correct decision. With these documents before him he will proceed to a personal examination.

The external form and general aspect often convey a vast amount of information to one accustomed to associate these with health and sickness. The habits of life, which may be ascertained by a few questions, will naturally lead to others; the trade, occupation, profession, etc., of the applicant come under this head of examination, and will enable the examiner to draw his inference as to their effects on the general health. The condition of the brain and spinal marrow will also be thus learned; for this can be ascertained to a sufficient extent by the gait, manner of speech, and want of control over the muscular system, exhibited in tremor, and other irregular movements, together with questions on these points which may suggest themselves.

In the examination of the chest, although it is of great importance, yet it is not necessary to ascertain anything more than that there is a departure from health ; it is not required that any detail of unfavorable symptoms be recorded, if any appear. The first step in the investigation, is to percuss the chest in all its parts, and then to apply the Stethescope, or the ear, to ascertain whether or not there exists a healthy respiration. Consider the capacity of the chest, whether narrow or expanded—whether there is any unusual depression in the subclavian regions—whether the chest expands equally on inspiration—any Bronchophony, particularly in the subclavian and mammary regions. The action of the heart is also ascertained by auscultation : ascertain whether the rythm of the heart is natural, and confined within the natural limits—whether the impulse of the heart is coincident with the first sound, and of natural intensity. When making a report, the state of the heart may be recorded "Normal," or "Abnormal," as the case may be.

The pulse, besides being regular, should never beat over 90 in a minute : if it cannot be re-

duced to this by changing to a recumbent position, rest, and time being given for the composure of the nervous system, and if necessary, two or three examinations, on different days—the applicant is to be rejected. A very careful investigation into the condition of the heart and lungs should be made, whenever the pulse is found to beat uniformly over 80.

An habitually rapid pulse is generally indicative of some organic affection. The pulse should always be regular in its beats, and never intermitting.

Spitting of blood, if it arise in a person of a consumptive family, must be a reason for rejection. If, however, it arises from a mere congestion of the mucous membrane of the bronchial tubes, it need not be a cause for declining the risk; a sufficient time, however, must elapse to ascertain, together with an examination of the chest, that it is of this nature. Bleeding from the lungs from violent straining, need not be a reason for rejecting the applicant—allowing, as in the former instance, a long time to pass to prove that it is but a local and temporary affection, and has not produced any disease

If either of these should be followed by cough or occasional difficulty of respiration, the party of course, must be rejected. It is needless to mention that more than usual care must be taken in the physical examination of such persons.

Occasional difficulty of breathing, or asthma, must always be rejected. The causes of these affections are often obscure, and as they arise from some obstruction in one or other of the vital organs, as the lungs or heart, safety requires that such cases should not be received.

There is an affection of the bowels which is often suddenly fatal; a person affected with it is by no means a safe risk: it is an obstruction, sometimes known as colic, bilious colic, or spasmodic colic; any person affected with this, ought to be rejected.

In making up a report to be transmitted to the parent office, there need be no remark made beyond the conclusions at which the examiner has arrived, a brief statement and expression of opinion, which ought to be unqualified, is all that is required. Whenever there is any statement of positive disease, it would be well for

the examiner to refer to it in a note to show that it has received his special attention.

The existence of tumors, hernia, hemorrhoids, fistula, &c., should be ascertained, and their condition ascertained by inspection. Fistula is a good reason for rejection. A hernia need not render the party incapable of availing himself of the benefits of life-insurance provided it be properly secured by a truss, and the occupation of the individual be such as not to endanger its protrusion by excessive straining.

When inquiring into the usual occupation of the applicant, the questions relating to exposure to insalubrious climates will naturally arise. If the party has been within the tropics, or in any part of the world known to be at times unhealthy, it will be necessary to inquire whether or not he has had any endemic diseases which have prevailed—and if so, if they have left any enlargement of the liver or spleen, or any other permanent effection of an important viscus.

Hereditary tendency to disease is an important part of an examination. There are, however, but four that appear to have a bearing upon the duration of life; these are con-

sumption, disease of the heart, insanity and epilepsy. Although diseases are termed hereditary, yet they are, more properly speaking, predispositions. Hence, the actual development of disease requires some co-operating circumstances, and it is not in every instance of the parent having either of the above named diseases that the applicant should be pronounced ineligible to life-insurance.

Consumption.—Consumption does not always descend from the parent to the child. But if either parent has been effected with it, and the offspring exhibits a slender form, or has a narrow or badly formed chest, or an habitually rapid pulse, the predisposition is evidently so strong, that some slight exposure or irregularity of living, or a constrained occupation in a close atmosphere, will almost surely develop the disease.

Many persons exhibit no such tendency, and, therefore, ought not to be rejected, because one of the family may have had the disease. It is different, however, if two parents have died of it, or one parent and one child. Under these

circumstances the applicant ought not to be insured until he has passed the period at which he is likely to be affected with the disease. Now it appears from records carefully made, that more persons die of consumption between the ages of 18 and 35 years than at any other age, the mortality from this cause sinking very rapidly to comparatively a small number after the last mentioned age. Hence, it is advisable that the party should have reached the age of comparative exemption. Forty years, therefore, is a good age that he should be required to attain before he is examined; some have limited the period to thirty-five years. It is of course supposed that all symptoms, both rational and physical, which indicate a predisposition to phthisis, be absent.

Disease of the Heart.—There are many examples on record of this predisposition inherited from parents. One of a family of high rank in Italy, which, for four successive generations, were effected with aneurism, or morbid enlargement of the heart. When a parent has died of this affection, it would be safe to exam-

ine an applicant with more than ordinary care ; advancing age in this disease will be more likely to aid in the development, than tend to lessen the predisposition, as is the case in phthisis.

Insanity.—The hereditary predisposition in this affection is so strong that it has been distinctly traced in six sevenths of the cases in a lunatic asylum. One instance of insanity in a family must be a cause of rejection.

Epilepsy.—Epilepsy in a parent need not be in every instance a cause of rejection. Its existence should lead to a very scrutinizing inquiry into the present condition of the party and his mode of living and occupation. No positive rule can be laid down ; it must be left to the sound judgment of the examiner.

General Indications of Longevity. A well proportioned stature without being too tall, but rather of the middle height, and tolerably stout. The complexion not too florid ; too much ruddiness, at least in youth, is seldom a sign of longevity. The hair should not be

black, but rather approaching to fair ; the skin strong, but not coarse. The head not too large. He should have prominent veins on the limbs and the shoulders rather round than flat. The neck is neither very long nor short. The stomach of such a person does not project—the hands are large, but not too deeply cleft. The foot is rather thick than long, and the inferior limbs are firm and round. The chest is broad and arched—the voice strong, and the faculty of retaining the breath for a considerable time without inconvenience or difficulty, is one of the most marked signs. In general there is a complete harmony of proportion among all the parts of the body.

A R G U M E N T S
IN
FAVOR OF LIFE INSURANCE.

ANSWER TO EXCUSES FOR NOT INSURING.

APPLICATION OF LIFE INSURANCE
TO DIFFERENT STATIONS IN LIFE.

LIFE INSURANCE
CONTRASTED WITH SAVINGS BANKS.

*Extracts from Lectures on Life-Insurance, by
an eminent Divine.*

OBJECTIONS ANSWERED.

I SHALL endeavor to answer and remove an objection of the nature of a prejudice against life-insurance in general, which, as it springs out of the religious nature of man, should be seriously met and respectfully considered.

To many, especially to such as habitually take serious views of life, of its shortness and uncertainty, the very suggestion of a proposal to insure one's life appears, at first thought, little less than impious: like a presumptuous attempt to interfere with the counsels of the Supreme Arbiter of life and death; and the mind of such a person recoils from the thought, as if to entertain it for one moment, would be a sin. This feeling may be met, perhaps, by remarking that, with some it results from a misapprehension of the real nature of life-insurance; as if it were the object of the contract to secure the insured party against *death*. But this is not the

object of the contract. It is not to secure against *death*, but against the unhappy *consequences* of death, before those who are dear to the insured, and dependent upon him, are placed by his previous labor and prudence beyond the painful feeling that they must be dependent upon the charity of others. Viewed in this light the religious objection vanishes at once and entirely; and not only so, but what at first and indistinctly seen appeared a sin, changes its character and becomes a moral duty.

The same objection lies against Marine or Fire Insurances as against Life; for the storms and other perils of the seas, are as much in the hands of the Ruler of the winds and the waves, as is the life of each individual of the human family. And yet no one thinks of raising it as an objection to insuring his ship at sea, that it is an interfering with the counsels of Him that “sitteth upon the floods;” or that it is an attempt to take out of His control what properly belongs to him. So, too, have I known those who had superstitious objections to making their own will; it looked to them like “tempting providence,” and they seemed to feel, though

perhaps they would not say,—that to make a will, would hasten on the time when it would be wanted to govern the administration of the estate.

But in the minds of others, who do correctly understand the object of the insurance, it may appear objectionable, not on religious, but on moral grounds, that it looks like a wager, a bet; or that, appealing to the doctrine of chances, it partakes of the nature of gambling.

Perhaps, when this objection is carefully examined, it will be found to rest upon no better foundation than the last.

We often speak of *chance*, as if the part that it acts in the affairs of men, were at once very important, very capricious, and sometimes very wicked. But, as science gains new conquests over the domains of ignorance, chance acts a less and less conspicuous part in the drama of human life. All mere inert matter has its laws; laws as constant as are its qualities—laws, too, imposed upon it by the All-ruling Spirit of the universe. These are as much the laws of God as are any that have been enunciated by the prophets of God in the Holy Oracles.

All life, too, is subject to law. This is true alike in the vegetable and in the animal creation. And it is a part of man's wisdom to investigate the laws of life. This can be effected only by careful observation, extended over a wide surface, and embracing considerable periods of time; for the life of *each individual*, is generally very uncertain. It has been well remarked that, after such a series of observations of the phenomena of human life and human action, man is seen to be an enigma, only as an *individual*; in the *mass*, he is a mathematical problem.*

This may be said not only of the duration of life, but to a very great extent, to his actions—even those of them that appear most accidental.

Mental phenomena—things that appear entirely fortuitous when observed in an individual—recur with wonderful regularity in great masses; almost as regularly as do natural phenomena. Indeed, “this regularity is exactly of the same kind as that of the weather. No man can say what may be the weather of to-morrow; but the quantity of rain which falls in

* See *Vestiges of Creation*, pp 231—232.

any particular place, in any five years, is precisely the same as the quantity which falls in any other five years at the same place."

From this it would seem that events, apparently the most accidental, are regulated; and that even chance itself is subject to law. And it is upon the knowledge of facts like these that fire and marine insurances are effected.

Now the statistical observations upon the length of the life of man, and the prospect of life which he enjoys at any particular year of it, have been the work of many individuals. They extend over a large part of two centuries, and embrace hundreds of thousands of lives, and though they do not pretend to affirm of *any* individual, in health, that he will live one year or ten, they do affirm, and with no little confidence, that of a large number of men, at a particular age, *so many* will die in one year. Upon the basis of such observations is Life-insurance conducted.

I trust that sufficient has been now advanced, to remove from the mind of any one any degree of prejudice he may have entertained, either of a religious or moral character, against the idea

of insuring one's life ; for, on closer examination, it must be seen that the whole system of Life-Insurance—so far from tempting Providence, by an attempt to interfere with the laws of God—rests, in fact, upon those laws as its only basis ; and that the parties to the insurance recognise those laws as at once divine and immutable, and consult their mutual advantage by putting themselves where, and where only, security and well-being can be found for man—*under the protection of those laws.* And so far from the insurance being an appeal to blind chance, or one form of gambling, it appears to be, and, in fact, is one mode of banishing that blind and capricious goddess, *chance*, from the world and its great affairs, and of bringing the human mind to recognise all the affairs of men—not only their lives, but even the operations of their minds, and that, too, in their most wild and, apparently, capricious operations—as under the control of a high and beneficent law.

Motives to induce Persons to Insure.

I BEGIN with that consideration which, in fact, is one of the lowest motives from which a moral being *should* act, but which, at the same time, I am sorry to be compelled to believe is one of the strongest from which men *do* act; I mean the desire of pecuniary profit. It is one of the best investments that a man can possibly make of his money. I mean that the money which a man pays, as premium on a life-insurance, conducted on the mutual system, will yield a better pecuniary return, considering both the rate of increase and the security of payment, than in any other regular business within the limited circle of my knowledge.

Another consideration in favor of a life policy, and of the same general character—that is, a pecuniary character—is this: it operates as a strong and constant motive to *economy in the expenditure of money*. I know not how it may be with others, but I can answer for myself, that the difficulty, in pecuniary matters, has generally been, not in earning money, but in keeping, or

wisely investing it. The gratifications of the present are apt to put out of sight the necessities of the future. The present call we know and feel. The future want we do not know, and cannot feel; and so we live "from hand to mouth," blindly presuming against the whole experience of others—that, "to-morrow shall be as this day, if not still more abundant;" and thus if old age finds us at all, it finds us more or less, often absolutely, dependent upon the earnings and savings of those who have been more provident than ourselves. But, when one has put forth one such effort of a provident spirit as he must put forth, to take out a policy on his life, and pay one premium upon it, rather than lose the benefit of the first effort he will make a second; and every premium that he pays, the motive becomes stronger; and with every new payment the cord is strengthened that binds him to provide for the next; while at the same time, the habit of economy is growing imperceptibly upon him, and the effort becomes less and less painful.

Still another consideration of the same general character, that is calculated to recommend

the investment of a portion of each year's earnings in a life-insurance is, the security that it furnishes against the fluctuations of fortune. In a country like this of ours, good men, even the excellent of the earth, are subjected to great vicissitudes of fortune, or reverses in business. Prosperous for a series of years—when the laying aside of a few hundred dollars a year would not be felt—they experience perhaps in the very noon of their business day, one of those sudden calamities, which not the wise can always avoid, and their fortunes and even their hopes of ever again rising are completely wrecked. If now he has been so provident as to have seen these “breakers ahead,” and made himself a partner in a Life-Insurance Company, he will feel that much has been done to diminish the force of the blow, especially as regards his interest in those who are sharers in his earthly lot. For there is a dependence, should he then be taken from them.

2. There is another light in which I feel myself not only justified in presenting this subject, but bound in duty to present it; and that is the light of a *moral duty*. This is contemplating

the subject before us from a more elevated point of view, than when we regard it as a matter of pecuniary profit. "The cares of the world," are presented by the great Author of our Christian faith, as apt to "choke his word and render it unfruitful." This is one of the natural effects of excessive care concerning our temporal affairs. The doubtful character of debts, the security and profit of investments, the rise and fall of stocks, go far to not only deprive a man of that measure of contentment and rest which are indispensable to bodily health, but also to draw away the mind from those moral and religious exercises which are equally indispensable to the highest improvement and happiness of man. It is obvious, therefore, that it is a moral duty to reduce the burden of care so far as is compatible with justice to those who have claims upon us. And much of this burden is thrown off from the heart of a man who has placed himself in a position—as every partner in a Life-Insurance Company does—in which his annual gains, or at least a portion of them, are securely invested, and when all care of them is taken by others, who are one in interest

with himself, and who, in their every act, are overseen and counselled by still others who have the same community of interest.

A man who has his dwelling-house insured, feels very differently, on the approach of a conflagration, from his neighbor, who has been less provident, and whose house is nearly his all. Still more different must be the feelings of two men under the attack of a disease, which will probably be fatal, when one of them feels that he shall leave his family above want, and the other that *his* will be dependent upon the labors or charities of others—especially is this obvious when we consider that the *house may* never burn down, but that the lamp of life *must* burn out.

It seems to me, therefore, that it is a moral duty a man owes *himself*, thus to lift himself, while he may, above these cares that so directly war against his peace, and I deem it not too serious to say, against the purity and uprightness of his own spirit.

3. And, once more, I regard it a moral duty of—perhaps I ought to say, every man who either is, or expects to become, the head of a

family—to take out a life policy—a moral duty to that family to insure his life, to such an amount as his means will enable him, and their position in life demands.

Considering how exceedingly frail is every man's tenure of life, and how absolutely dependent upon the father of the family the mother and younger members of it usually are, we can apprehend, though even then we can but inadequately apprehend, the moral obligation by which every father is held to do all in his power to guard those objects from a part of the force of the blow that they must all feel when *he* is struck down by death. In addition to the overwhelming *grief* that comes with the dreadful blow, especially in a country like our own, where so small a portion of the young families *inherit* a competent support—there comes the calamity of want—stern, unpitying *want*—want, that calls clamorously for the exercise of powers that its victims have not—want, that brings with it sore trials to all, and too often its sore temptations to the female part of the family, mother or daughters, or both—want, that is so often allied to ignorance and

vice, and that is so apt to take away the key of knowledge, and doom the young to those evil associations that cluster around the needy and the exposed. I would respectfully ask, my friends, is it not the duty of all fathers who are not entirely above the fear of this dreadful *want*, in regard to their children, should they be suddenly left fatherless, to give them just that protection against this fearful foe to their peace and virtue, which it is the express and special object of life-insurance to furnish? Can any one visit one of the orphan asylums that are so creditable to the humanity of our large cities, or, still worse, who will see the thousands of the lost ones who congregate in the haunts of vice in those cities because there was no friend to lead them to an Orphan Asylum, and learn how large a proportion of those little ones, or those lost ones, are children of early-widowed and poor mothers, who had been left with neither means to educate their children or even a home to shelter them, and fail to come to the conclusion that it was the father's duty, as a great point of natural morality, to have guarded these loved, but now lost ones, against this ruin, by

placing them above the reach of the destroyer, by means of a policy of insurance, that would have given the widow a home, and the children support and education ?

Can a true man suppose, when in health and prosperity he contemplates the contingency of an early or sudden death, that in his dying hour he will feel that he has done his duty to those whom he must leave behind him, when he sees that they are to be left to the sad inheritance of such want and such exposure ? Can a Christian father contemplate such an hour with such a prospect, without bringing to his mind the declaration of the Apostle, that he who—when he can so easily do it—provideth not for his own, even his own household, has denied his Christian faith, and is practically worse than an unbeliever ? I put these questions to the serious consideration and to the conscience of those who hear me.

ANSWER TO EXCUSES FOR NOT EFFECTING INSURANCE.

VARIOUS are the excuses for the omission of this most incumbent duty. Some say they will be their own insurers ; that they will lay aside annually a sum equal to the amount they would be required to pay to an insurance office, and by letting out the money at compound interest, accumulate an amount as rapidly as though it were under the management of an insurance office. This is an impossibility. But admitting that he can, long before his accumulations amount to the desired sum, death knocks at his door, and his accumulations cease ; whereas, had he effected an insurance, the occurrence of death instead of interrupting would have expedited the accumulation, by rendering the company liable *forthwith* for the whole sum insured, although only a single year's premium had been paid.

Some men will not insure, because they can not insure for a *large sum*—but promise when

able to pay the premium on a *large sum*, that they will take a policy. The man's *vanity* prevents his taking a smaller policy upon which he is abundantly able to pay the premium. While waiting to be *able* to pay a *large* premium, death steps in and leaves his wife and family penniless, sorrow-stricken, and broken-hearted, thrust on the cold kindness of *quasi* charitable relations, without a cent to bury him or provide food for themselves—and this, because he, the loving and devoted husband, would not make even a temporary provision, consonant with his circumstances, for the wife who had been his nurse in sickness, his friend in distress, and whom he had sworn to cherish and protect—and by the payment of twenty or thirty dollars annually for seven years, secure two thousand dollars for her use, provided he should die within that period!

In those solitary hours when woman is left to her own reflections—when the busy and bustling husband is stirring with the world, and floating on the stream of an imaginary prospective affluence—how often does the future present itself to her view, unselfishly as regards herself—

but painfully absorbing as regards her offspring! How can she bring the subject to her husband's notice without startling his affection, or in many cases without subjecting herself to a bitter and brutal insinuation? Her delicacy—her affection revolt from the idea of proposing to him the necessity of that which she feels to be his duty, and which he should be the first to suggest. She listens to his tale of future wealth and independence, of speculative thousands, and regrets to think that a paltry sum is withheld, which, under a sudden affliction, might be the saving of herself from destruction, her infant from a bleak and dreary childhood. The husband, if spoken to on the subject, often mistaking his wife's delicacy—his wife's diffidence—his wife's dislike to allude to a period which must bring to her so all-absorbing a loss—will declare that he "*has* spoken on the subject, and *has* been requested never to mention it again." Strange that *man*, who owes to his wife the chief charm of his existence, the every-day comfort of his life, should be able to look heartlessly to that period when their last parting shall take place—when removed to that world

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where, to him, all is hope and consolation—he shall have wilfully left her in darkness and desolation, steeped in poverty and wretchedness, to struggle with the hard justice of a hard-handed world.

Let woman speak for woman—let each urge the other's claim, and make selfish man comprehend that he has a conscientious course to pursue, a bounden duty to perform, in providing for those who constitute his “home;” and that, in “resorting to life-insurance, he is risking nothing, but truly securing a certain profit upon that which is at all times an uncertain event.”

APPLICATION OF LIFE-INSURANCE TO DIFFERENT STATIONS IN LIFE.

THE nature of a life-insurance is not always understood. It is a contract between a company and an individual, that in consideration of a sum paid down, or of a less sum paid annually by the individual to the company, his heirs or assigns shall receive from the company a larger sum when he dies. An insurance against fire is a contract, that the individual whose house is insured shall receive payment for it, if it is destroyed by fire. A marine insurance is a contract that the individual whose vessel is insured shall receive a certain sum if his vessel is lost at sea. In neither case is there, as there has been supposed by some to be in life-insurance, an impious attempt to prevent the will of Providence, but a wise and prudent endeavor to render such events as are beyond our control less calamitous than without such caution they would be. The amount to be paid by the company, and the amount to be received by the heirs or assigns, is settled by calculation, and is

determined by observations made on the duration of life at different ages, and the interest allowed for money.

An insurance may be made for one year, for several years, or for the whole life. In the former cases, the money is paid by the company, if the individual insured die within the period for which he is insured. In the latter case the money is to be paid whenever the insured dies.

It would require much time to state all the cases in which life-insurance may be employed for the benefit of families and individuals, and to facilitate and make secure operations otherwise hazardous. The most general use made of a life-insurance is, by persons living on income, to secure a family, by its means, a comfortable support after the death of its head or parent. This is accomplished by the payment annually to an insurance office, of such portion of the individual's income as can be spared, and for which payment the office contracts to pay, after the death of the insured, to his heirs or assigns, a fixed sum, the amount depending on the annual premium paid by the insured.

To secure a family against want, on the death of the parent, is the most general use made of life-insurance ; but the cases in which it may be advantageously employed are as numerous as the circumstances in the lives of individuals are various.

A *creditor*, anxious about the safety of his debt, in case his debtor should die, may relieve himself from anxiety by insuring his debtor's life, in which case he would receive from the office the amount of his debt, in the event of the death of the party.

An individual is desirous of entering upon a hazardous enterprise ; he sees in it a fair prospect of improving his circumstances, but it requires his personal skill and attention ; he fears, should he die, his family will not be able successfully to conclude it. By a life-insurance he puts himself at ease ; a small part of his annual gains enables him to pay a life-insurance, which secures his family a support should he die, and his enterprise fail in consequence of his death.

A farmer has a farm on life lease, depending on his own life or on the lives of other persons ; should he or they die the support of his family

will be gone. A small part of his gains applied to insuring his own life, or the lives on which the estate depends, will secure the means of buying another farm, or paying for another lease.

An individual has a wife, an aged parent, an infant child, an infirm friend, an old domestic, depending on him for support; a trifling sum paid annually for the insurance of his own life, will secure such parent, wife, child, friend, or domestic, from want, after the death of the insured.

A public spirited, or a charitable individual wishes to aid, by a legacy, a school, a college, a literary society, a church, or a charitable institution, his present means do not enable him to do so, to the extent of his wishes ; they may be accomplished by an annual sum, paid for an insurance to the amount he wishes to leave to the favored object. Suppose such a person is sixty years of age, and wishes to leave, at his death, five hundred dollars to a church, a charity, or a mission ; by insuring his life and paying thirty-five dollars a year, he can do so. How many worthy, pious, but poor clergymen, might

be relieved from anxious care, relative to their families, would their congregations unite and raise a small sum for the insurance of their lives. Suppose the clergyman fifty years old, ninety-two dollars a year would secure to his widow two thousand dollars whenever he died.

Surely such an institution deserves the consideration and the support of all prudent and reflecting men, and is doubly recommended, when it is considered how very small a sacrifice of some personal comfort or gratification will secure, by its means, the independence and happiness of a poor man's family. In this view of the subject, an unnecessary journey, an idle amusement, a few wasted days in each year, is a sacrifice of the education and clothing and food of objects the nearest and dearest to us all, should it please our Maker to take us from them. The tobacco chewer will readily consume his two cents a day, which will secure to his family, in case of his death, and if he is twenty-five, three hundred and fifty-eight dollars. What shall we say to the tippler of twenty-five, who, if he drinks one shilling a day, sacrifices two thousand two hundred and forty dollars ; a sum

sufficient to make a poor family rich, at a moment when independence at least, is so important to them.

Nor should I forget to mention, if an individual insures for life, and after a lapse of years finds an insurance no longer necessary, or the payment of the premium convenient, that he does not lose the whole of what he has paid. The office fairly calculates what is the value of the risk it has run, and pays back to the insured all he has paid over this sum, and which went to make up the consideration for the risk to be run in future. After a number of years the policy becomes of value to the insured ; it is a part of his property ; if he thinks proper to use it during his life, he receives back from the office no inconsiderable part of what has been paid, for the comfort of feeling secure and at ease during the previous years.

THE BENEFITS OF LIFE-INSURANCE CONTRASTED WITH THOSE OF INSTITUTIONS FOR SAVINGS.

It is supposed by many that future provision for a family is as effectually made by deposits in a *Savings' Bank* as by effecting an insurance. This is a mistake. It is conceded with pleasure, that a vast benefit was conferred by the introduction of Savings' Banks. It encouraged the savings of earnings by those who, before the introduction of such banks, were heedless in regard to such subjects; and accustomed them who before were distrustful, to repose confidence in moneyed institutions. This was the accomplishment of a great good, and the originators and supporters of those banks are entitled to be considered as public benefactors; but it is undeniable that Life-Insurance Companies may be used more beneficially than Savings' Banks, by those who resort to the latter. An Insurance Company accomplishes all that is done by a Savings' Bank, and much besides.

Like the Savings' Bank, it takes care of the depositor's money, and it virtually allows him interest upon his deposits: but it does more. But what is of higher importance to the depositor, the company engages in consideration of a certain sum of money paid to it annually, during the life of the depositor, to pay a much larger sum to his family upon his decease. For instance, in consideration of the sum of \$10.20, paid annually by the depositor, whose age at the making of the contract does not exceed twenty-five, the company engage to pay his family \$500 at his decease, although he should happen to die immediately after the making of the contract. The sum of \$10.20 must be paid annually during the life of the depositor; but on the other hand, besides the sum insured, the depositor participates in the *profits* of the company, which may be safely estimated to amount to a sum equal to one-third of the amount of the annual payments made. The amount of the premium to be paid, or payment to be made annually, depends upon the sum insured, and the age of the party; but the premium originally paid is not subsequently increased. Contrast this ope-

ration with a deposit in a Saving's Bank of \$10.20 annually for ten years. Supposing the party to die at the end of that time, he will have deposited \$102, and adding thereto interest at the rate of six per cent. per annum, his family would be entitled to demand of the Saving's Bank no more than \$130. Whereas, from an Insurance Company, although the premiums paid did not exceed \$102, they would be entitled to demand \$500, the sum insured, together with the profits.

The only advantage the Savings' Bank has over the Life Insurance Company, (if that can be deemed an advantage,) is that the depositor may, at his option, withdraw from the Savings' Bank the whole amount of his deposits. This he cannot do in a Life-Insurance Company. He may, after a certain period, on the strength of his policy, obtain a loan from the company, or he may surrender the policy and receive an equitable value; but the amount received, in either case, will, for several years, be inconsiderable. This, it is conceded, is an objection; but it is greatly over-balanced by the advantages resulting from insurance.

T A B L E S.

TABLES OF PREMIUMS.

THE following Tables of Premiums have been adopted by the *British Commercial Life Insurance Company* of London and America—one of the oldest, most respectable and successful Companies in existence :—

TABLE I.

Showing the Premium required for Insuring the Sum of \$100 on a Single Life, for One Year, for Seven years, or for the Whole of Life. The Premiums of Persons Assured for the Whole of Life may be paid Yearly, Half-Yearly, or Quarterly, as is shown in the following Table :—

Age.	\$	One Year.	Life.			Age.	\$	One Year.	Life.			
			Years	Yearly.	Half Yearly.				Years	Yearly.	Half Yearly.	
8 to												
14	0.76	0.86	1.46	0.74	0.38	38	1.58	1.64	2.67	1.35	0.69	
15	0.80	0.90	1.50	0.76	0.39	39	1.60	1.68	2.75	1.39	0.71	
16	0.84	0.93	1.54	0.78	0.40	40	1.62	1.71	2.85	1.44	0.73	
17	0.88	0.95	1.58	0.80	0.41	41	1.64	1.75	2.95	1.49	0.76	
18	0.92	0.98	1.62	0.82	0.42	42	1.66	1.80	3.05	1.54	0.78	
19	0.96	1.00	1.66	0.84	0.43	43	1.73	1.86	3.14	1.59	0.81	
20	0.97	1.03	1.70	0.86	0.44	44	1.80	1.93	3.24	1.64	0.84	
21	0.98	1.06	1.73	0.88	0.45	45	1.83	2.01	3.36	1.70	0.87	
22	1.02	1.09	1.76	0.89	0.46	46	1.86	2.10	3.53	1.78	0.91	
23	1.03	1.13	1.80	0.91	0.47	47	1.94	2.22	3.70	1.88	0.95	
24	1.08	1.16	1.83	0.93	0.48	48	2.02	2.33	3.91	1.98	1.00	
25	1.09	1.20	1.87	0.95	0.49	49	2.10	2.45	4.12	2.08	1.05	
26	1.13	1.25	1.90	0.96	0.50	50	2.24	2.58	4.30	2.18	1.10	
27	1.18	1.29	1.95	0.98	0.51	51	2.38	2.71	4.48	2.27	1.15	
28	1.23	1.32	1.98	1.00	0.52	52	2.53	2.84	4.67	2.36	1.20	
29	1.28	1.36	2.03	1.03	0.53	53	2.70	2.97	4.83	2.45	1.25	
30	1.29	1.39	2.10	1.06	0.54	54	2.75	3.08	5.00	2.53	1.29	
31	1.34	1.43	2.17	1.10	0.56	55	2.88	3.20	5.25	2.66	1.35	
32	1.40	1.46	2.23	1.13	0.57	56	..	..	5.51	2.79	1.42	
33	1.41	1.49	2.30	1.16	0.59	57	..	..	5.70	2.89	1.47	
34	1.43	1.52	2.35	1.19	0.61	58	..	..	5.91	2.99	1.53	
35	1.48	1.55	2.43	1.23	0.62	59	..	..	6.14	3.10	1.58	
36	1.50	1.58	2.51	1.27	0.64	60	..	..	6.37	3.23	1.64	
37	1.56	1.61	2.60	1.32	0.67	..	..	..	..	..	..

TABLE II.
PARTICIPATION OF PROFITS.

Showing the Premium required to Insure the Sum of \$100 on a Single Life for the Whole of Life, when the Insurers are Participators in the Profits, in Annual, Half-Yearly, or Quarterly Payments.

Age.	Premium.			Age.	Premium.		
	Annual.	Half Yearly.	Quar- terly.		Annual.	Half Yearly.	Quar- terly.
8 to	\$	\$	\$	38	\$	\$	\$
14	1.79	0.90	0.46	39	3.07	1.55	0.79
15	1.84	0.93	0.47	40	3.15	1.59	0.81
16	1.89	0.95	0.48	41	3.23	1.63	0.83
17	1.94	0.98	0.50	42	3.32	1.68	0.85
18	1.98	1.00	0.51	43	3.41	1.72	0.87
19	2.03	1.03	0.52	44	3.52	1.78	0.90
20	2.08	1.05	0.53	45	3.60	1.82	0.92
21	2.12	1.07	0.54	46	3.70	1.88	0.95
22	2.16	1.09	0.55	47	3.85	1.95	0.99
23	2.20	1.11	0.56	48	4.00	2.03	1.03
24	2.24	1.13	0.57	49	4.17	2.11	1.07
25	2.29	1.16	0.59	50	4.35	2.20	1.12
26	2.33	1.18	0.60	51	4.55	2.30	1.17
27	2.38	1.20	0.61	52	4.78	2.42	1.23
28	2.43	1.23	0.62	53	5.01	2.54	1.29
29	2.49	1.26	0.64	54	5.23	2.65	1.34
30	2.54	1.28	0.65	55	5.40	2.73	1.39
31	2.60	1.31	0.67	56	5.59	2.83	1.43
32	2.63	1.33	0.68	57	5.78	2.93	1.48
33	2.72	1.38	0.69	58	5.99	3.03	1.54
34	2.78	1.41	0.71	59	6.21	3.14	1.59
35	2.85	1.44	0.73	60	6.45	3.26	1.65
36	2.92	1.48	0.75	..	6.69	3.38	1.72
37	2.99	1.51	0.77	..	..	..	..

TABLE I.
COMPOUND INTEREST,

Showing the *Amount* of \$1 improved at Compound Interest,
for any number of years not exceeding 100.

Years.	1 per Ct.	1½ per Ct.	2 per Ct.	2½ per Ct.	3 per Ct.	3½ per Ct.
1	1.010000	1.015000	1.020000	1.025000	1.030000	1.035000
2	1.020100	1.030225	1.040400	1.050625	1.060900	1.071225
3	1.030301	1.045678	1.061208	1.076891	1.092727	1.108718
4	1.040604	1.061363	1.082432	1.103813	1.125509	1.147523
5	1.051010	1.077284	1.104081	1.131408	1.159274	1.187686
6	1.061520	1.093444	1.126162	1.159693	1.194052	1.229255
7	1.072135	1.109845	1.148686	1.188686	1.229874	1.272279
8	1.082856	1.126492	1.171659	1.218403	1.266770	1.316809
9	1.093685	1.143389	1.195093	1.248863	1.304773	1.362897
10	1.104622	1.160540	1.218994	1.280085	1.343916	1.410599
11	1.115668	1.177948	1.243374	1.312087	1.384234	1.459970
12	1.126825	1.195616	1.268242	1.344889	1.425761	1.511069
13	1.138093	1.213550	1.293607	1.378511	1.468534	1.563956
14	1.149474	1.231754	1.319479	1.412974	1.512590	1.618695
15	1.160969	1.250231	1.345868	1.448298	1.557967	1.675349
16	1.172579	1.268984	1.372786	1.484506	1.604706	1.733986
17	1.184305	1.288019	1.400241	1.521618	1.652848	1.794676
18	1.196148	1.307339	1.428246	1.559659	1.702433	1.857489
19	1.208109	1.326948	1.456811	1.598650	1.753506	1.922501
20	1.220190	1.346851	1.485947	1.638616	1.806111	1.989789
21	1.232292	1.367055	1.515666	1.679582	1.860295	2.059431
22	1.244716	1.387562	1.545980	1.721571	1.916103	2.131512
23	1.257163	1.408376	1.576899	1.764611	1.973587	2.206114
24	1.269735	1.429502	1.608437	1.808726	2.032794	2.283328
25	1.283432	1.450945	1.640606	1.853944	2.093778	2.363245
26	1.295256	1.472709	1.673418	1.900293	2.156591	2.445959
27	1.308209	1.494800	1.706886	1.947800	2.221289	2.531567
28	1.321291	1.517222	1.741024	1.996495	2.287928	2.6020172
29	1.334504	1.539980	1.775845	2.046407	2.356566	2.711878
30	1.347849	1.563080	1.811362	2.097568	2.427262	2.806794
31	1.361327	1.586527	1.847589	2.150007	2.500080	2.905031
32	1.374940	1.610324	1.884541	2.203757	2.575083	3.006708
33	1.388689	1.634479	1.922231	2.258851	2.652335	3.111942
34	1.402576	1.658997	1.960676	2.315329	2.731905	3.220860
35	1.416602	1.683882	1.999890	2.373205	2.813862	3.333590
36	1.430768	1.709141	2.039887	2.432535	2.898278	3.450266
37	1.445076	1.734777	2.080685	2.493349	2.985227	3.571025
38	1.459527	1.760799	2.122299	2.555682	3.074783	3.696011
39	1.474122	1.787211	2.164745	2.619574	3.167027	3.825372
40	1.488863	1.814019	2.208040	2.685064	3.262038	3.959260
41	1.503752	1.841229	2.252200	2.752190	3.359899	4.097834
42	1.518790	1.868847	2.297244	2.820995	3.460696	4.241258
43	1.533978	1.896879	2.343189	2.891520	3.564517	4.389702
44	1.549318	1.925333	2.390053	2.963808	3.671452	4.543342
45	1.564811	1.954212	2.437854	3.037903	3.781596	4.702359
46	1.580459	1.983525	2.486611	3.113851	3.895044	4.866941
47	1.596264	2.013277	2.536344	3.391697	4.011895	5.037284
48	1.612227	2.043477	2.587070	3.271490	4.132252	5.213589
49	1.628349	2.074129	2.638812	3.353277	4.256219	5.396065
50	1.644632	2.105240	2.691588	3.437109	4.383906	5.584927

TABLE I.
COMPOUND INTEREST,

Showing the *Amount* of \$1 improved at Compound Interest,
for any number of years not exceeding 100.

Years.	1 per Ct.	1½ per Ct.	2 per Ct.	2½ per Ct.	3 per Ct.	3½ per Ct.
51	1.661078	2.136818	2.745420	3.523036	4.515423	5.780399
52	1.677689	2.168870	2.800328	3.611112	4.650886	5.982713
53	1.694466	2.201404	2.856335	3.701390	4.790412	6.192108
54	1.711411	2.234425	2.913461	3.793925	4.934123	6.408832
55	1.728525	2.267916	2.971731	3.888773	5.082149	6.633141
56	1.745810	2.301964	3.031165	3.985992	5.234613	6.865301
57	1.763268	2.336494	3.091789	4.085642	5.391651	7.105587
58	1.780901	2.371541	3.153624	4.187783	5.553401	7.354282
59	1.798710	2.407114	3.216697	4.292478	5.720003	7.611682
60	1.816697	2.443220	3.281031	4.399790	5.891603	7.878091
61	1.834864	2.479868	3.346651	4.509784	6.068351	8.153824
62	1.853213	2.517067	3.413584	4.622529	6.250402	8.439206
63	1.871745	2.554823	3.481856	4.738092	6.437914	8.734580
64	1.890462	2.593145	3.551493	4.856545	6.631051	9.040291
65	1.909367	2.632042	3.622523	4.977958	6.829983	9.356701
66	1.928461	2.671522	3.694974	5.102407	7.034882	9.684185
67	1.947746	2.711594	3.768873	5.229967	7.245929	10.023132
68	1.967223	2.752267	3.844251	5.360717	7.463307	10.373941
69	1.986895	2.793550	3.921136	5.494734	7.687206	10.737029
70	2.006764	2.835454	3.999558	5.632103	7.917822	11.112825
71	2.026832	2.877986	4.079549	5.772905	8.155357	11.501774
72	2.047100	2.921156	4.161140	5.917228	8.400017	11.904336
73	2.067571	2.964974	4.244363	6.065159	8.652018	12.320988
74	2.088247	3.009449	4.329250	6.216788	8.911578	12.752223
75	2.109129	3.054590	4.415835	6.372207	9.178926	13.198550
76	2.130220	3.100409	4.504152	6.531513	9.454293	13.660500
77	2.151522	3.146913	4.594235	6.694800	9.737922	14.138617
78	2.173037	3.194117	4.686120	6.862170	10.030060	14.633469
79	2.194767	3.242029	4.779842	7.033725	10.330962	15.145640
80	2.216715	3.290659	4.875439	7.209568	10.640891	15.675738
81	2.238882	3.340020	4.972948	7.389807	10.960117	16.224388
82	2.261271	3.390120	5.072407	7.574552	11.288921	16.792242
83	2.283884	3.440971	5.173855	7.763916	11.627588	17.379970
84	2.306723	3.492586	5.277332	7.958014	11.976416	17.988269
85	2.329790	3.544975	5.382879	8.156964	12.335709	18.617859
86	2.353088	3.598150	5.490536	8.360888	12.705780	19.269484
87	2.376619	3.652123	5.600347	8.569911	13.086953	19.943916
88	2.400385	3.706905	5.712354	8.784158	13.479562	20.641953
89	2.424389	3.762509	5.826601	9.003762	13.883949	21.364421
90	2.448633	3.818947	5.943133	9.228856	14.300467	22.112176
91	2.473119	3.876231	6.061996	9.459578	14.729481	22.886102
92	2.497850	3.934374	6.183236	9.696067	15.171366	23.687116
93	2.522828	3.993390	6.306900	9.938469	15.626507	24.516165
94	2.548056	4.053291	6.433038	10.186931	16.095302	25.374230
95	2.573537	4.114090	6.561699	10.441604	16.578161	26.262329
96	2.599272	4.175800	6.692933	10.702644	17.075506	27.181510
97	2.625265	4.238437	6.826792	10.970210	17.587771	28.132863
98	2.651518	4.302013	6.963328	11.244646	18.115404	29.117513
99	2.678033	4.366543	7.102594	11.525577	18.658866	30.136626
100	2.704813	4.432011	7.244646	11.813716	19.218632	31.191408

TABLE I.
COMPOUND INTEREST,

Showing the *Amount* of \$1 improved at Compound Interest,
for any number of years not exceeding 100.

Years.	4 per Ct.	4½ per Ct.	5 per Ct.	6 per Ct.	7 per Ct.	8 per Ct.
1	1.040000	1.045000	1.050000	1.060000	1.070000	1.080000
2	1.081600	1.092025	1.102500	1.123600	1.144900	1.166400
3	1.124864	1.141166	1.157625	1.191016	1.225043	1.259712
4	1.169859	1.192519	1.215506	1.262477	1.310796	1.360489
5	1.216653	1.246182	1.276282	1.338226	1.402552	1.469328
6	1.265319	1.302260	1.340096	1.418519	1.500730	1.586874
7	1.315932	1.360862	1.407100	1.503630	1.603781	1.713824
8	1.368569	1.422101	1.477455	1.593848	1.718186	1.850930
9	1.423312	1.486095	1.551328	1.689479	1.838459	1.999005
10	1.480244	1.552969	1.628895	1.790848	1.967151	2.158925
11	1.539454	1.622853	1.710339	1.898299	2.104852	2.331639
12	1.601032	1.695881	1.795856	2.012196	2.252192	2.518170
13	1.665074	1.772196	1.885649	2.132928	2.409845	2.719624
14	1.731676	1.851945	1.979932	2.260904	2.578534	2.937194
15	1.800944	1.935282	2.078928	2.396558	2.759032	3.172169
16	1.872981	2.022370	2.182875	2.540352	2.952164	3.425943
17	1.947901	2.113377	2.292018	2.692773	3.158815	3.700018
18	2.025817	2.208479	2.406619	2.854339	3.379932	3.996020
19	2.106849	2.307860	2.526950	3.025600	3.616528	4.315701
20	2.191123	2.411714	2.653298	3.207135	3.869684	4.660957
21	2.278768	2.520241	2.785963	3.399564	4.140562	5.033834
22	2.369919	2.633652	2.925261	3.603537	4.430402	5.436540
23	2.464716	2.752166	3.071524	3.819750	4.740530	5.871464
24	2.563304	2.876014	3.225100	4.048935	5.072367	6.341181
25	2.665836	3.005434	3.386355	4.291871	5.427433	6.848475
26	2.772470	3.140679	3.555673	4.549383	5.807353	7.396353
27	2.883369	3.282010	3.733456	4.822346	6.213868	7.988061
28	2.998703	3.429700	3.920129	5.111687	6.648838	8.627106
29	3.118651	3.584036	4.116136	5.418388	7.114257	9.317275
30	3.243398	3.745318	4.321942	5.743491	7.612255	10.062657
31	3.373133	3.913857	4.538039	6.088101	8.145113	10.867669
32	3.508059	4.089981	4.764941	6.453387	8.715271	11.737083
33	3.648381	4.274030	5.003189	6.840590	9.325340	12.676050
34	3.794316	4.466362	5.233348	7.251025	9.978114	13.690134
35	3.946089	4.667348	5.516015	7.686087	10.676581	14.785344
36	4.103933	4.877378	5.791816	8.147252	11.423942	15.968172
37	4.268090	5.096860	6.081407	8.636087	12.223618	17.245626
38	4.438813	5.326219	6.385477	9.154252	13.079271	18.625276
39	4.616366	5.565899	6.704751	9.703507	13.994820	20.115298
40	4.801021	5.816365	7.039989	10.285718	14.974458	21.724522
41	4.993061	6.078101	7.391988	10.902861	16.022670	23.462483
42	5.192784	6.351615	7.761588	11.557033	17.144257	25.339482
43	5.400495	6.637438	8.149667	12.250453	18.344355	27.366640
44	5.616515	6.936123	8.557150	12.985482	19.628460	29.555972
45	5.841176	7.248248	8.985008	13.764611	21.002452	31.920449
46	6.074823	7.574420	9.434258	14.590487	22.472623	34.474083
47	6.317816	7.915268	9.905971	15.465917	24.045707	37.232012
48	6.570528	8.271456	10.401270	16.393872	25.728907	40.210573
49	6.833349	8.643671	10.921333	17.377504	27.529930	43.427419
50	7.106683	9.032636	11.467400	18.420154	29.457025	46.901613

TABLE I.
COMPOUND INTEREST,

Showing the *Amount* of \$1 improved at Compound Interest,
for any number of years not exceeding 100.

Yrs.	4 per Ct.	4½ per Ct.	5 per Ct.	6 per Ct.	7 per Ct.	8 per Ct.
51	7.390951	9.439105	12.040770	19.525364	31.519017	50.653742
52	7.686589	9.863865	12.642808	20.696885	33.725348	54.706041
53	7.994052	10.307739	13.274949	21.938698	36.086122	59.082524
54	8.313814	10.771587	13.938696	23.255020	38.612151	63.809126
55	8.646367	11.256308	14.635631	24.650322	41.315001	68.913856
56	8.992229	11.762842	15.367412	26.129341	44.207052	74.426965
57	9.351910	12.292170	16.135783	27.697101	47.301545	80.381122
58	9.725987	12.845318	16.942572	29.358927	50.612653	86.811612
59	10.115026	13.423357	17.789701	31.120463	54.155539	93.756540
60	10.519627	14.027408	18.679186	32.987691	57.946427	101.257064
61	10.940413	14.658641	19.613145	34.966952	62.002677	109.357629
62	11.378029	15.318280	20.593802	37.064969	66.342864	118.106239
63	11.833150	16.007603	21.623493	39.288868	70.986865	127.554738
64	12.306476	16.727945	22.704667	41.646200	75.955945	137.759117
65	12.798735	17.480702	23.839901	44.144972	81.272861	148.779847
66	13.310685	18.267334	25.031896	46.793670	86.961962	160.682234
67	13.843112	19.089364	26.283490	49.601290	93.049299	173.536813
68	14.396830	19.948385	27.597665	52.577368	99.562750	187.419758
69	14.972710	20.846063	28.977548	55.732010	106.532142	202.413339
70	15.571618	21.784136	30.426426	59.075930	113.989392	218.606406
71	16.194483	22.764422	31.947747	62.620486	121.968650	236.094918
72	16.842262	23.788821	33.545134	66.377715	130.506455	254.982512
73	17.515953	24.859318	35.222391	70.360378	139.641907	275.381113
74	18.216591	25.977987	36.983510	74.582001	149.416840	297.411602
75	18.945255	27.146996	38.832686	79.056921	159.876019	321.204530
76	19.703065	28.368611	40.774320	83.800336	171.067341	346.900892
77	20.491187	29.645199	42.813036	88.828356	183.042054	374.652964
78	21.310835	30.979233	44.953688	94.158058	195.854998	404.625201
79	22.163268	32.373298	47.201372	99.807541	209.564848	436.995217
80	23.049799	33.830096	49.561441	105.795993	224.234388	471.954834
81	23.971791	35.352451	52.039513	112.143753	239.930795	509.711221
82	24.930663	36.943311	54.641489	118.872378	256.725950	550.488119
83	25.927889	38.605760	57.373563	126.004721	274.696767	594.527168
84	26.965005	40.343019	60.242241	133.565004	293.925341	642.089342
85	28.043605	42.158455	63.254353	141.578904	314.500328	693.456489
86	29.165349	44.055586	66.417071	150.073639	336.515351	748.933008
87	30.331963	46.038087	69.737925	159.078057	360.071426	808.847649
88	31.545242	48.109801	73.224821	168.622740	385.276426	873.555461
89	32.807051	50.274742	76.886062	178.740105	412.245776	943.439897
90	34.119333	52.537105	80.730365	189.464511	441.102980	1018.91509
91	35.484107	54.901275	84.766883	200.832382	471.980188	1100.42830
92	36.903471	57.371832	89.005227	212.882325	505.01802	1188.46276
93	38.379610	59.953565	93.455489	225.655264	540.370118	1283.53936
94	39.914794	62.651473	98.128263	239.194580	578.196026	1386.22273
95	41.511386	65.470792	103.034676	253.546255	618.669748	1497.12055
96	43.171841	68.416977	108.186410	268.759030	661.976630	1616.89019
97	44.898715	71.495741	113.595731	284.884572	708.314994	1746.24141
98	46.694664	74.713050	119.275517	301.977646	757.897044	1885.94072
99	48.562450	78.075137	125.239293	320.096305	810.949837	2036.81598
100	50.504948	81.588518	131.501258	339.302084	867.716326	2199.76126

TABLE II.

COMPOUND INTEREST.

The amount of \$1 *per annum* in any number of Years.

Years.	4 per Cent.	4½ per Cent.	5 per Cent.	6 per Cent.
1	1.000000	1.000000	1.000000	1.000000
2	2.040000	2.045000	2.050000	2.060000
3	3.121600	3.137025	3.152500	3.183600
4	4.246464	4.278191	4.310125	4.374616
5	5.416323	5.470710	5.525631	5.637093
6	6.632975	6.716892	6.801913	6.975319
7	7.898294	8.019152	8.142008	8.393838
8	9.214226	9.380014	9.549109	9.897468
9	10.582795	10.802114	11.026564	11.491316
10	12.006107	12.288209	12.577893	13.180795
11	13.486351	13.841179	14.206787	14.971643
12	15.025805	15.464032	15.917127	16.869941
13	16.626838	17.159913	17.712983	18.882138
14	18.291911	18.932109	19.598632	21.015066
15	20.023588	20.784054	21.578564	23.275970
16	21.824531	22.719337	23.657492	25.672528
17	23.697512	24.741707	25.840366	28.212880
18	25.645413	26.855084	28.132385	30.905653
19	27.671229	29.063562	30.539004	33.759992
20	29.778079	31.371423	33.065954	36.785591
21	31.969202	33.783137	35.719252	39.992727
22	34.247970	36.303378	38.505214	43.392290
23	36.617889	38.937030	41.430475	46.995828
24	39.082604	41.689196	45.501999	50.815577
25	41.645908	44.565210	47.727099	54.864512
26	44.311745	47.570645	51.113454	59.156383
27	47.084214	50.711324	54.669126	63.705768
28	49.967583	53.993333	58.402583	68.528112
29	52.966286	57.423033	62.327112	73.639798
30	56.084938	61.007070	66.438848	79.058186
31	59.328335	64.752388	70.760790	84.801677
32	62.701469	68.666245	75.298829	90.889778
33	66.209527	72.756226	80.063771	97.343165
34	69.857909	77.030256	85.066959	104.183755
35	73.652225	81.496618	90.320307	111.434780
36	77.508314	86.163966	95.836323	119.120867
37	81.702246	91.041344	101.638139	127.268119
38	85.970336	96.138205	107.709546	135.904206
39	90.409150	101.464424	114.095023	145.058458
40	95.025516	107.030323	120.799774	154.761966
41	99.826536	112.846688	127.830763	165.047684
42	104.819508	118.924789	135.231751	175.950545
43	110.012382	125.276404	142.993339	187.507577
44	115.412877	131.913842	151.143006	199.758032
45	121.029392	138.849965	159.700156	212.743514
46	126.870568	146.098214	168.685164	226.508125
47	132.945390	153.672633	178.119422	241.098612
48	139.263206	161.587902	188.025393	256.564529
49	145.833734	169.859357	199.426663	272.958401
50	152.667084	178.503028	209.347996	290.335905

TABLE II.

The amount of \$1 *per annum* in any number of Years.

Years.	4 per Cent.	4½ per Cent.	5 per Cent.	6 per Cent.
51	159.773767	187.535665	220.815395	308.756059
52	167.164718	196.974769	232.856165	328.281422
53	174.851306	206.838634	245.498974	348.978308
54	182.845359	217.146373	258.773922	370.917006
55	191.159173	227.917959	272.712618	394.172027
56	199.805540	239.174268	287.348249	418.822348
57	208.797762	250.937110	302.715662	444.951689
58	218.149672	263.229280	318.851445	472.648790
59	227.875659	276.074597	335.794017	502.007718
60	237.990685	289.497954	353.583718	533.128181
61	248.510313	303.525362	372.262904	566.115872
62	259.450725	318.184003	391.876049	601.082824
63	270.828754	333.502283	412.469851	638.147793
64	282.661904	349.509886	434.093344	677.436661
65	294.968381	366.237831	456.798011	719.082861
66	307.767116	383.718533	480.637912	763.227832
67	321.077800	401.985867	505.669807	810.021502
68	334.920912	421.075231	531.953298	859.622792
69	349.317749	441.023617	559.550963	912.203160
70	364.290159	461.869680	588.528511	967.932170
71	379.862077	483.653815	618.954936	1027.008100
72	396.056560	506.418237	650.902683	1089.628586
73	412.898823	530.207057	684.447817	1156.006301
74	430.414776	555.0066375	719.670298	1226.366679
75	448.631367	581.044362	756.653718	1300.948080
76	467.576621	608.191358	795.486404	1380.005601
77	487.279686	636.559969	836.260725	1463.805937
78	507.770874	666.205168	879.073761	1552.634293
79	529.081708	697.181401	924.027449	1646.792350
80	551.244977	729.557699	971.228821	1746.599891
81	574.294776	763.387795	1020.790262	1852.395885
82	598.266567	798.740246	1072.829775	1964.539638
83	623.197230	835.683557	1127.471264	2083.412016
84	649.125119	874.289317	1184.844827	2209.416737
85	676.090124	914.632336	1245.087069	2342.981741
86	704.133728	956.790791	1308.341422	2484.560646
87	733.299078	1000.846377	1374.758493	2634.634285
88	763.631041	1046.884464	1444.496418	2793.712342
89	793.176282	1094.994265	1517.721239	2962.335082
90	827.983334	1145.269007	1594.607301	3141.075187
91	862.102667	1197.806112	1675.337066	3330.539698
92	897.586774	1252.707387	1760.104549	3531.372080
93	934.490245	1310.079219	1849.109777	3744.254405
94	972.869854	1370.032784	1942.565265	3969.909669
95	1012.784649	1432.684259	2040.693529	4209.104250
96	1054.296035	1498.155051	2143.728205	4462.650505
97	1097.467876	1566.572028	2251.914615	4731.409535
98	1142.306591	1638.067770	2365.510346	5016.294107
99	1189.061255	1712.780819	2481.78564	5318.271753
100	1237.623705	1790.855956	2610.025157	5638.368059

TABLE II.
COMPOUND INTEREST.

The amount of \$1 *per annum* in any number of Years

Years.	7 per Cent.	8 per Cent.	9 per Cent.	10 per Cent.
1	1.000000	1.000000	1.000000	1.000000
2	2.070000	2.080000	2.090000	2.100000
3	3.214900	3.246400	3.278100	3.310000
4	4.439943	4.506112	4.573129	4.641000
5	5.750739	5.866601	5.984711	6.105100
6	7.153291	7.335929	7.523335	7.715610
7	8.654021	8.922803	9.200435	9.487171
8	10.259803	10.636628	11.028474	11.435888
9	11.977989	12.487558	13.021036	13.579477
10	13.816448	14.486562	15.192930	15.937425
11	15.783599	16.645487	17.560293	18.531167
12	17.888451	18.977126	20.140720	21.384284
13	20.140643	21.495297	22.953385	24.522712
14	22.550488	24.214920	26.019189	27.974983
15	25.129022	27.152114	29.360916	31.772482
16	27.888054	30.324283	33.003399	35.949730
17	30.840217	33.750226	36.973705	40.544703
18	33.999033	37.450244	41.301338	45.599173
19	37.378965	41.446263	46.018458	51.159090
20	40.995492	45.761964	51.160120	57.274999
21	44.865177	50.422921	56.764530	64.002499
22	49.005739	55.456755	62.873338	71.402749
23	53.436141	60.893296	69.531939	79.543024
24	58.176671	66.764759	76.789813	88.497327
25	63.249038	73.105940	84.700896	98.347059
26	68.676470	79.954415	93.323977	109.181765
27	74.483823	87.350768	102.723135	121.099912
28	80.697691	95.338830	112.968217	134.209936
29	87.346529	103.965936	124.135356	148.630930
30	94.460786	113.283211	136.307539	164.494023
31	102.073041	123.345868	149.575217	181.943425
32	110.218154	134.213537	164.036987	201.137767
33	118.933425	145.950620	179.800315	222.251544
34	128.258765	158.626670	196.982344	245.476699
35	138.236878	172.316804	215.710755	271.024368
36	148.913460	187.102148	236.124723	299.126805
37	160.337402	203.070320	258.375918	330.039486
38	172.561020	220.315945	282.629783	364.013434
39	185.640292	238.941221	309.066463	401.417778
40	199.635112	259.056519	337.882445	442.292556
41	214.609570	280.781040	369.291865	487.851811
42	230.639240	304.243523	403.525133	537.636992
43	247.776496	329.583005	440.845665	592.400692
44	266.120851	356.949646	481.521775	652.640761
45	285.749311	386.505617	525.858734	718.904837
46	306.751763	418.426067	574.186021	791.793321
47	329.224386	452.900152	626.862762	871.974853
48	353.270093	490.132164	684.280411	960.172338
49	378.999000	530.342737	746.865648	1057.189572
50	406.528929	573.770156	815.083556	1163.908529

TABLE II.

The amount of \$1 per annum in any number of Years.

Years.	7 per Cent.	8 per Cent.	9 per Cent.	10 per Cent.
51	435.985955	620.671769	889.441076	1281.299382
52	467.504971	671.325510	970.490773	1410.429320
53	501.230319	726.031551	1058.834943	1552.472252
54	537.316442	785.114075	1155.130088	1708.719477
55	575.928593	848.923201	1260.091796	1880.591425
56	617.243594	917.837058	1374.500057	2069.650567
57	661.450646	992.264022	1499.205063	2277.615624
58	708.752191	1072.645144	1635.133518	2306.377186
59	759.364844	1159.456755	1783.295535	2758.014905
60	813.520383	1253.213296	1944.792133	3034.816395
61	871.466810	1354.470360	2120.823425	3339.298035
62	933.469487	1463.827988	2312.697533	3674.9227838
63	999.812351	1581.934227	2521.840311	4042.650622
64	1070.799216	1709.488966	2749.805939	4447.915685
65	1146.755161	1847.248083	2908.288474	4893.707253
66	1228.028022	1996.027929	3269.134436	5384.077978
67	1314.989083	2156.710164	3564.356535	5923.485776
68	1408.039282	2330.246977	3886.148624	6516.834354
69	1507.602032	2517.666735	4236.902000	7169.517789
70	1614.134174	2720.080074	4619.223180	7887.469568
71	1728.123566	2938.686480	5035.953266	8677.216525
72	1850.092216	3174.781398	5490.189060	9545.938177
73	1980.598671	3429.763910	5985.306075	10301.531995
74	2120.240578	3705.145023	6524.983622	11532.685195
75	2369.657419	4002.556624	7113.232148	12708.953714
76	2429.533438	4323.761154	7754.423011	13980.849085
77	2600.600779	4670.662047	8453.321115	15379.933994
78	2783.642833	5045.315011	9215.120015	16918.927393
79	2979.497831	5449.940211	10045.480817	18611.820133
80	3189.062680	5886.935428	10950.574090	20474.002146
81	3413.297067	6358.890263	11937.125758	22522.402360
82	3653.227862	6868.601484	13012.467077	24775.642596
83	3909.953812	7419.089602	14184.589114	27254.206856
84	4184.650579	8013.616770	15462.202134	29980.627542
85	4478.576120	8655.706112	16851.800326	32979.690296
86	4793.076448	9349.162601	18372.732355	36278.659326
87	5129.591799	10098.095609	20027.278267	39097.525258
88	5489.663225	10906.943258	21830.733311	43899.277784
89	5874.939651	11780.498718	23796.499309	48290.205562
90	6287.185427	12723.938616	25939.184247	53120.226119
91	6728.288407	13742.853705	28274.710829	58433.218730
92	7200.268595	14843.2*2002	30826.434804	64277.573603
93	7705.287397	16031.744562	33595.273936	70706.330964
94	8245.657515	17315.284127	36619.848590	77777.964060
95	8823.853541	18701.506857	39916.634964	85556.760466
96	9442.523288	20198.627405	43510.132110	94113.436513
97	10104.499919	21815.517598	47427.014000	103525.780164
98	10812.814913	23561.759006	51696.477960	113879.358180
99	11570.711957	25147.699726	56350.160977	125268.293998
100	12381.661794	27481.515704	61422.675465	137796.123398

VALUE OF ANNUITIES ON A SINGLE LIFE.

(*Northampton Table of Mortality.*)

Age.	4 per cent.	5 per cent.	6 per cent.	7 per cent.	8 per cent.
1	13.4663	11.563	10.107	8.963	8.046
2	15.6336	13.420	11.724	10.391	9.321
3	16.4626	14.135	12.348	10.941	9.812
4	17.0109	14.613	12.769	11.815	10.147
5	17.2500	14.827	12.962	11.489	10.304
6	17.4832	15.041	13.156	11.666	10.466
7	17.6122	15.166	13.275	11.777	10.570
8	17.6632	15.226	13.337	11.840	10.631
9	17.6260	15.210	13.385	11.846	10.641
10	17.5248	15.139	13.285	11.809	10.614
11	17.3944	15.043	13.212	11.752	10.569
12	17.2524	14.937	13.130	11.687	10.517
13	17.1050	14.826	13.044	11.618	10.461
14	16.9517	14.710	12.953	11.544	10.401
15	16.7923	14.588	12.857	11.467	10.337
16	16.6265	14.460	12.755	11.384	10.268
17	16.4638	14.334	12.655	11.302	10.200
18	16.3111	14.217	12.562	11.226	10.137
19	16.1691	14.108	12.477	11.157	10.081
20	16.0254	14.007	12.398	11.094	10.030
21	15.9141	13.917	12.329	11.042	9.986
22	15.7997	13.833	12.265	10.993	9.947
23	15.6827	13.746	12.200	10.942	9.907
24	15.5630	13.658	12.132	10.890	9.865
25	15.4405	13.567	12.063	10.836	9.823
26	15.3152	13.473	11.992	10.780	9.778
27	15.1870	13.377	11.917	10.723	9.732
28	15.0557	13.278	11.841	10.663	9.685
29	14.9212	13.177	11.763	10.602	9.635
30	14.7835	13.072	11.682	10.539	9.584
31	14.6423	12.965	11.598	10.473	9.531
32	14.4977	12.854	11.512	10.404	9.476
33	14.3494	12.740	11.423	10.333	9.418
34	14.1958	12.623	11.331	10.260	9.359
35	14.0415	12.502	11.236	10.183	9.296
36	13.8815	12.377	11.137	10.104	9.231
37	13.7172	12.249	11.035	10.021	9.164
38	13.5486	12.116	10.929	9.935	9.093
39	13.3754	11.979	10.819	9.845	9.019
40	13.1974	11.837	10.705	9.752	8.941
41	13.0184	11.695	10.589	9.657	8.863
42	12.8385	11.551	10.473	9.562	8.783
43	12.6580	11.407	10.356	9.466	8.703
44	12.4691	11.258	10.235	9.366	8.620
45	12.2835	11.105	10.110	9.262	8.533
46	12.0892	10.947	9.980	9.154	8.443
47	11.8899	10.784	9.846	9.042	8.348

VALUE OF ANNUITIES ON A SINGLE LIFE.

(*Northampton Table of Mortality.*)

Age.	4 per cent.	5 per cent.	6 per cent.	7 per cent.	8 per cent.
48	11.6866	10.616	9.707	8.925	8.249
49	11.4753	10.443	9.563	8.804	8.146
50	11.2649	10.269	9.417	8.681	8.041
51	11.0586	10.097	9.273	8.559	7.937
52	10.8497	9.925	9.129	8.437	7.833
53	10.6379	9.748	8.980	8.311	7.725
54	10.4220	9.567	8.827	8.181	7.614
55	10.2011	9.382	8.670	8.047	7.499
56	9.9777	9.193	8.509	7.909	7.379
57	9.7494	8.999	8.343	7.766	7.256
58	9.5169	8.801	8.173	7.619	7.123
59	9.2804	8.599	7.999	7.468	6.996
60	9.0400	8.392	7.820	7.312	6.860
61	8.7957	8.181	7.637	7.152	6.719
62	8.5478	7.966	7.449	6.988	6.574
63	8.2913	7.742	7.258	6.815	6.421
64	8.0310	7.514	7.052	6.637	6.262
65	7.7616	7.276	6.841	6.449	6.095
66	7.4882	7.034	6.625	6.256	5.922
67	7.2109	6.787	6.405	6.058	5.743
68	6.9301	6.536	6.179	5.855	5.559
69	6.6473	6.281	5.949	5.646	5.370
70	6.3619	6.023	5.716	5.434	5.176
71	6.0758	5.764	5.479	5.218	4.978
72	5.7904	5.504	5.241	5.000	4.778
73	5.5076	5.245	5.004	4.781	4.576
74	5.2304	4.990	4.769	4.565	4.375
75	4.9626	4.744	4.542	4.354	4.180
76	4.7102	4.511	4.326	4.154	3.994
77	4.4574	4.277	4.109	3.952	3.806
78	4.1979	4.035	3.884	3.742	3.609
79	3.9217	3.776	3.641	3.514	3.394
80	3.6439	3.515	3.394	3.281	3.174
81	3.3777	3.263	3.156	3.055	2.960
82	3.1219	3.020	2.926	2.836	2.751
83	2.8874	2.797	2.713	2.632	2.557
84	2.7054	2.627	2.551	2.479	2.410
85	2.5436	2.471	2.402	2.337	2.275
86	2.3934	2.328	2.266	2.207	2.151
87	2.2516	2.193	2.138	2.085	2.035
88	2.1316	2.080	2.031	1.984	1.939
89	1.9677	1.924	1.882	1.842	1.803
90	1.7582	1.723	1.689	1.656	1.625
91	1.4739	1.447	1.422	1.398	1.374
92	1.1715	1.153	1.136	1.118	1.102
93	.8276	.816	.806	.795	.785
94	.5301	.524	.518	.512	.507
95	.2404	.238	.236	.234	.232

THE PRESENT VALUE OF ONE DOLLAR

To be received at the end of the year in which an assigned life may fail, at 4, 5, 6, 7, and 8 per cent interest.

(Carlisle rate of Mortality.)

Age.	4 per cent.	5 per cent.	6 per cent.	7 per cent.	8 per cent.
0	.41224	.37700	.35251	.33421	.32015
1	.32483	.28595	.25974	.24079	.22674
2	.27976	.23891	.21179	.19253	.17867
3	.24173	.19886	.17065	.15097	.13696
4	.22187	.17757	.14857	.12847	.11430
5	.20800	.16238	.13255	.11198	.09748
6	.20211	.15548	.12491	.10387	.08904
7	.20038	.15286	.12163	.10007	.08489
8	.20137	.15305	.12117	.09916	.08363
9	.20419	.15514	.12264	.10021	.08480
10	.20533	.15862	.12558	.10263	.08637
11	.21313	.16281	.12921	.10577	.08919
12	.21789	.16695	.13277	.10891	.09193
13	.22272	.17114	.13640	.11211	.09474
14	.22762	.17543	.14013	.11538	.09763
15	.23249	.17967	.14381	.11859	.10045
16	.23706	.18362	.14715	.12147	.10289
17	.24150	.18733	.15026	.12408	.10511
18	.24590	.19110	.15343	.12677	.10733
19	.25052	.19505	.15677	.12958	.10970
20	.25532	.19919	.16028	.13259	.11222
21	.26031	.20352	.16402	.13579	.11496
22	.26562	.20819	.16809	.13933	.11807
23	.27115	.21810	.17240	.14312	.12141
24	.27690	.21824	.17692	.14711	.12496
25	.28289	.22367	.18174	.15136	.12874
26	.28901	.22919	.18672	.15581	.13267
27	.29538	.23500	.19198	.16052	.13689
28	.30176	.24086	.19725	.16529	.14119
29	.30791	.24633	.20211	.16962	.14504
30	.31333	.25129	.20642	.17335	.14830
31	.31903	.25623	.21083	.17714	.15155
32	.32491	.26162	.21547	.18120	.15504
33	.33113	.26729	.22051	.18564	.15889
34	.33771	.27333	.22594	.19049	.16319
35	.34457	.27967	.23172	.19565	.16773
36	.35170	.28633	.23783	.20115	.17274
37	.35901	.29319	.24411	.20684	.17793
38	.36649	.30024	.25062	.21279	.18326
39	.37416	.30752	.25736	.21894	.18889
40	.38178	.31477	.26404	.22509	.19444
41	.38911	.32167	.27033	.23085	.19963
42	.39636	.32852	.27666	.23648	.20467
43	.40364	.33533	.28294	.24210	.20971
44	.41120	.34257	.28957	.24805	.21504
45	.41905	.35010	.29658	.25440	.22074
46	.42734	.35810	.30400	.26127	.22696
47	.43607	.36662	.31204	.26873	.23378
48	.44542	.37586	.32087	.27697	.24141
49	.45565	.38610	.33077	.28639	.25030
50	.46658	.39714	.34164	.29679	.26022
51	.47824	.40905	.35347	.30831	.27126

THE PRESENT VALUE OF ONE DOLLAR

To be received at the end of the year in which an assigned life may fail, at 4, 5, 6, 7, and 8 per cent interest.

(Carlisle rate of Mortality.)

Age.	4 per cent.	5 per cent.	6 per cent.	7 per cent.	8 per cent.
52	.49008	.42124	.36558	.32015	.28267
53	.50211	.43971	.37804	.33238	.29459
54	.51436	.44648	.39089	.34507	.30696
55	.52694	.45967	.40431	.35842	.32007
56	.53977	.47319	.41812	.37229	.33370
57	.55286	.48710	.43243	.38668	.34800
58	.56591	.50105	.44687	.40121	.36252
59	.57833	.51433	.46062	.41514	.37644
60	.58987	.52667	.47386	.42803	.38926
61	.60007	.53752	.48445	.43922	.40036
62	.61012	.54824	.49549	.45027	.41183
63	.62083	.55914	.50676	.46165	.42259
64	.63103	.57067	.51875	.47389	.43481
65	.64203	.58262	.53126	.48664	.44763
66	.65347	.59510	.54440	.50012	.46183
67	.66589	.60824	.55882	.51451	.47593
68	.67770	.62186	.57247	.52969	.49141
69	.69043	.63605	.58809	.54565	.50793
70	.70349	.65067	.60889	.56234	.52519
71	.71701	.66595	.62058	.58000	.54971
72	.72979	.68043	.63638	.59687	.56134
73	.74136	.69357	.65075	.61225	.57748
74	.75161	.70524	.66355	.62586	.59178
75	.76004	.71481	.67396	.63698	.60283
76	.76831	.72419	.68421	.64791	.61481
77	.77597	.73291	.69877	.65805	.62548
78	.78378	.74181	.70351	.66851	.63645
79	.79256	.75191	.71472	.68055	.64919
80	.80066	.76119	.72502	.69167	.66096
81	.80950	.77148	.73645	.70410	.67422
82	.81745	.78067	.74675	.71529	.68615
83	.82561	.79019	.75740	.72693	.69559
84	.83352	.79948	.76781	.73838	.71089
85	.84173	.80910	.77874	.75042	.72393
86	.84891	.81762	.78836	.76108	.73548
87	.85477	.82452	.79623	.76978	.74496
88	.85833	.82570	.80101	.77502	.75067
89	.86242	.83857	.80658	.79078	.75733
90	.86861	.84103	.81513	.79196	.76793
91	.86929	.84186	.81615	.78684	.76926
92	.86569	.83752	.81111	.77973	.76311
93	.86156	.83248	.80528	.77633	.75578
94	.85962	.83005	.80234	.77633	.75185
95	.85568	.82876	.80064	.77424	.74941
96	.86047	.83071	.80268	.77626	.75126
97	.86569	.83676	.80936	.78352	.75904
98	.87184	.84391	.81734	.79216	.76822
99	.88127	.85500	.82996	.80609	.78326
100	.89797	.87515	.85306	.88193	.81163
101	.91500	.89562	.87689	.88575	.84138
102	.93224	.91653	.90125	.88650	.87207
103	.94921	.93728	.92562	.91417	.90304

THE PRESENT VALUE OF ONE DOLLAR PER
ANNUUM,

For any number of years to 100, at 4, 5, 6, 7, and 8 per cent interest.

Yrs.	4 per cent.	5 per cent.	6 per cent.	7 per cent.	8 per cent.
1	.961538	.952381	.943896	.934579	.925926
2	1.886095	1.859410	1.833393	1.808018	1.783265
3	2.775091	2.723248	2.673012	2.624316	2.577097
4	3.629895	3.545951	3.465106	3.387211	3.312127
5	4.451822	4.329477	4.212364	4.100197	3.992710
6	5.242137	5.075692	4.917324	4.766540	4.622880
7	6.002055	5.786373	5.582381	5.39289	5.206370
8	6.732745	6.463213	6.209794	5.971299	5.746639
9	7.435332	7.107822	6.801692	6.515232	6.246888
10	8.110596	7.721735	7.360087	7.023582	6.710081
11	8.760477	8.306414	7.886375	7.498674	7.138964
12	9.385074	8.863252	8.388344	7.942686	7.536078
13	9.985648	9.393573	8.852683	8.357651	7.903776
14	10.563123	9.898641	9.294984	8.745468	8.244287
15	11.118387	10.379658	9.712249	9.107914	8.559479
16	11.652296	10.837770	10.105895	9.446649	8.851369
17	12.165669	11.274066	10.477260	9.763223	9.121638
18	12.659297	11.639587	10.827603	10.059087	9.371887
19	13.133939	12.058321	11.158116	10.335595	9.603599
20	13.590826	12.462210	11.469921	10.594014	9.818147
21	14.029160	12.821158	11.764077	10.835527	10.016803
22	14.451115	13.163003	12.041582	11.061241	10.200744
23	14.856842	13.488574	12.303879	11.272187	10.371059
24	15.246963	13.795642	12.550353	11.469334	10.528758
25	15.622080	14.093945	12.783356	11.653583	10.674776
26	15.982769	14.375185	13.003166	11.825779	10.809978
27	16.329586	14.643084	13.210534	11.986709	10.985165
28	16.663063	14.898127	13.406164	12.137111	11.051078
29	16.983715	15.141074	13.596721	12.277674	11.158406
30	17.292033	15.372451	13.764831	12.409041	11.257788
31	17.583494	15.592811	13.929086	12.531814	11.349799
32	17.873552	15.802677	14.084043	12.646555	11.434999
33	18.147646	16.002549	14.230230	12.758790	11.518888
34	18.411198	16.192904	14.368141	12.854009	11.516934
35	18.664613	16.374194	14.498246	12.947672	11.654568
36	18.908282	16.546852	14.620987	13.035208	11.717193
37	19.142579	16.711287	14.736780	13.117017	11.775179
38	19.367864	16.867893	14.846019	13.193473	11.828869
39	19.584455	17.017041	14.949075	13.264928	11.875852
40	19.792774	17.159086	15.046297	13.331709	11.924613
41	19.993052	17.294368	15.188016	13.394120	11.967235
42	20.185627	17.423208	15.224548	13.452449	12.006699
43	20.374795	17.545912	15.306173	13.506962	12.043240
44	20.548841	17.662773	15.383182	13.557908	12.077074
45	20.720040	17.774070	15.455832	13.605522	12.108402
46	20.884654	17.880067	15.524370	13.650020	12.137409
47	21.042936	17.981016	15.589028	13.691608	12.164267
48	21.195131	18.077158	15.650027	13.730474	12.189136
49	21.341472	18.168722	15.707572	13.766799	12.212163
50	21.482185	18.255925	15.761861	13.800746	12.233485

THE PRESENT VALUE OF ONE DOLLAR PER
ANNUM,

For any number of years to 100, at 4, 5, 6, 7 and 8 per cent interest.

Yrs.	4 per cent.	5 per cent.	6 per cent.	7 per cent.	8 per cent.
51	21.617485	18.338977	15.813076	13.832473	12.253227
52	21.747582	18.418073	15.861893	13.862124	12.271506
53	21.872675	18.498403	15.906974	13.898836	12.288432
54	21.992957	18.565146	15.949976	13.915735	12.304103
55	22.108612	18.638472	15.996543	13.939939	12.318614
56	22.219819	18.698545	16.028814	13.962560	12.332050
57	22.326749	18.760519	16.064919	13.983701	12.344491
58	22.429567	18.819542	16.098980	14.003459	12.356010
59	22.528430	18.875754	16.131113	14.021924	12.366676
60	22.623490	18.929290	16.161428	14.039181	12.376552
61	22.714894	18.980276	16.190026	14.055309	12.385696
62	22.802783	19.028834	16.217006	14.070383	12.394163
63	22.887291	19.075080	16.242458	14.084470	12.402003
64	22.968549	19.119124	16.266470	14.097635	12.409262
65	23.046682	19.161070	16.289123	14.109940	12.415988
66	23.121810	19.201019	16.310493	14.121439	12.422207
67	23.194048	19.239066	16.330654	14.132186	12.427969
68	23.263507	19.275301	16.349673	14.142230	12.438305
69	23.330296	19.309810	16.376617	14.151617	12.438245
70	23.394515	19.342677	16.388454	14.160889	12.442820
71	23.456264	19.378978	16.400513	14.168588	12.447055
72	23.515639	19.403788	16.415578	14.176251	12.450977
73	23.572730	19.432179	16.429791	14.183412	12.454608
74	23.627625	19.459218	16.443199	14.190104	12.457971
75	23.680408	19.484970	16.455348	14.196359	12.461084
76	23.731162	19.509495	16.467781	14.202205	12.463967
77	23.779963	19.532553	16.479039	14.207668	12.466636
78	23.826888	19.555098	16.489659	14.212774	12.469107
79	23.872008	19.576284	16.499679	14.217546	12.471396
80	23.915392	19.596460	16.509131	14.222005	12.478514
81	23.957108	19.615677	16.518048	14.226173	12.475476
82	23.997219	19.633978	16.526460	14.230069	12.477298
83	24.035787	19.651407	16.534896	14.233709	12.478975
84	24.072572	19.668007	16.541883	14.237111	12.480532
85	24.108531	19.683816	16.549847	14.240291	12.481974
86	24.142818	19.698878	16.555610	14.243262	12.483810
87	24.175787	19.713212	16.561896	14.246040	12.484546
88	24.207487	19.726869	16.567827	14.249635	12.485691
89	24.237969	19.739875	16.573421	14.251061	12.486751
90	24.267278	19.752262	16.578699	14.253828	12.487732
91	24.295459	19.764059	16.583679	14.255447	12.488641
92	24.322557	19.775294	16.588376	14.257427	12.489452
93	24.348612	19.785994	16.592868	14.259277	12.490261
94	24.373666	19.796185	16.596988	14.261007	12.490988
95	24.397756	19.805891	16.600932	14.262623	12.491951
96	24.420919	19.815134	16.604653	14.264134	12.492269
97	24.443191	19.823937	16.608163	14.265546	12.492542
98	24.464607	19.832321	16.611475	14.266865	12.493372
99	24.485199	19.840306	16.614599	14.268098	12.493868
100	24.504999	19.847910	16.617546	14.269251	12.494318

VALUE OF ANNUITIES ON A SINGLE LIFE.

(Carlisle Table of Mortality.)

Age.	4 per ct.	5 per ct.	6 per ct.	7 per ct.	8 per ct.	9 per ct.	10 per c.
1	16.554	18.995	12.078	10.605	9.439	8.502	7.732
2	17.726	14.953	12.925	11.342	10.088	9.080	8.251
3	18.715	15.824	13.652	11.978	10.651	9.584	8.705
4	19.231	16.271	14.042	12.322	10.957	9.858	8.954
5	19.592	16.590	14.325	12.574	11.184	10.064	9.141
6	19.745	16.735	14.460	12.698	11.298	10.168	9.237
7	19.790	16.790	14.518	12.756	11.354	10.221	9.287
8	19.764	16.786	14.526	12.770	11.371	10.240	9.306
9	19.691	16.742	14.500	12.754	11.362	10.236	9.304
10	19.583	16.669	14.448	12.717	11.334	10.214	9.286
11	19.458	16.581	14.384	12.669	11.296	10.183	9.261
12	19.334	16.494	14.321	12.621	11.259	10.153	9.238
13	19.209	16.406	14.257	12.572	11.221	10.123	9.213
14	19.081	16.316	14.191	12.522	11.182	10.091	9.187
15	18.995	16.227	14.126	12.473	11.144	10.061	9.161
16	18.836	16.144	14.067	12.429	11.111	10.034	9.140
17	18.721	16.066	14.012	12.389	11.081	10.011	9.122
18	18.606	15.987	13.956	12.348	11.051	9.988	9.104
19	18.486	15.904	13.997	12.305	11.019	9.963	9.085
20	18.361	15.817	13.835	12.259	10.985	9.937	9.064
21	18.231	15.726	13.769	12.210	10.948	9.909	9.041
22	18.093	15.628	13.697	12.156	10.906	9.876	9.015
23	17.950	15.525	13.621	12.098	10.861	9.841	8.987
24	17.800	15.417	13.541	12.037	10.813	9.802	8.955
25	17.644	15.303	13.456	11.972	10.762	9.761	8.921
26	17.485	15.187	13.368	11.904	10.709	9.718	8.886
27	17.320	15.065	13.275	11.832	10.652	9.671	8.847
28	17.154	14.942	13.182	11.759	10.594	9.624	8.808
29	16.996	14.827	13.096	11.693	10.542	9.582	8.773
30	16.852	14.723	13.020	11.636	10.498	9.543	8.747
31	16.705	14.617	12.942	11.578	10.454	9.514	8.719
32	16.552	14.506	12.860	11.516	10.407	9.476	8.690
33	16.390	14.387	12.771	11.448	10.355	9.435	8.657
34	16.219	14.260	12.675	11.374	10.297	9.389	8.619
35	16.041	14.127	12.573	11.295	10.235	9.339	8.575
36	15.855	13.987	12.465	11.211	10.163	9.285	8.584
37	15.665	13.843	12.354	11.124	10.098	9.228	8.488
38	15.471	13.695	12.239	11.033	10.026	9.169	8.439
39	15.271	13.542	12.120	10.939	9.950	9.107	8.388
40	15.073	13.390	12.002	10.845	9.875	9.046	8.337
41	14.883	13.245	11.890	10.757	9.805	8.991	8.292
42	14.694	13.101	11.779	10.671	9.737	8.937	8.249
43	14.505	12.957	11.668	10.555	9.669	8.883	8.206
44	14.308	12.806	11.551	10.494	9.597	8.826	8.160
45	14.104	12.648	11.428	10.397	9.520	8.764	8.111
46	13.889	12.480	11.296	10.292	9.436	8.697	8.056
47	13.662	12.301	11.154	10.178	9.344	8.622	7.995
48	13.419	12.107	10.998	10.052	9.241	8.537	7.925
49	13.153	11.892	10.823	9.908	9.121	8.437	7.840
50	12.869	11.660	10.631	9.749	8.957	8.324	7.744
51	12.565	11.410	10.422	9.573	8.838	8.197	7.684

VALUE OF ANNUITIES ON A SINGLE LIFE.

(Carlisle Table of Mortality.)

Age.	4 per ct.	5 per ct.	6 per ct.	7 per ct.	8 per ct.	9 per c.	10 per c.
52	12.257	11.154	10.208	9.392	8.684	8.064	7.519
53	11.945	10.892	9.988	9.205	8.523	7.926	7.399
54	11.626	10.624	9.761	9.011	8.356	7.781	7.272
55	11.299	10.347	9.524	8.807	8.179	7.627	7.137
56	10.966	10.063	9.280	8.595	7.995	7.465	6.994
57	10.625	9.771	9.027	8.375	7.802	7.294	6.843
58	10.286	9.478	8.772	8.153	7.606	7.120	6.687
59	9.963	9.199	8.529	7.940	7.418	6.954	6.539
60	9.663	8.940	8.304	7.743	7.245	6.800	6.402
61	9.398	8.712	8.108	7.572	7.095	6.669	6.285
62	9.186	8.487	7.913	7.403	6.947	6.539	6.171
63	8.871	8.258	7.714	7.229	6.795	6.404	6.052
64	8.593	8.016	7.502	7.042	6.630	6.258	5.922
65	8.307	7.765	7.281	6.847	6.457	6.104	5.784
66	8.009	7.503	7.049	6.641	6.272	5.938	5.635
67	7.699	7.227	6.803	6.421	6.075	5.760	5.474
68	7.379	6.941	6.546	6.189	5.866	5.570	5.301
69	7.048	6.643	6.277	5.945	5.643	5.368	5.115
70	6.709	6.336	5.988	5.690	5.410	5.153	4.918
71	6.357	6.015	5.704	5.420	5.160	4.923	4.704
72	6.025	5.711	5.424	5.162	4.922	4.701	4.498
73	5.724	5.435	5.170	4.927	4.704	4.499	4.309
74	5.458	5.190	4.944	4.719	4.511	4.319	4.142
75	5.239	4.959	4.760	4.549	4.355	4.175	4.008
76	5.023	4.792	4.579	4.382	4.200	4.031	3.874
77	4.824	4.609	4.410	4.227	4.056	3.898	3.751
78	4.621	4.422	4.238	4.067	3.908	3.760	3.623
79	4.393	4.210	4.040	3.883	3.736	3.599	3.471
80	4.182	4.015	3.853	3.713	3.577	3.450	3.331
81	3.953	3.799	3.656	3.523	3.398	3.252	3.172
82	3.746	3.606	3.474	3.352	3.237	3.130	3.029
83	3.534	3.406	3.296	3.174	3.069	2.970	2.877
84	3.328	3.211	3.102	2.999	2.903	2.813	2.728
85	3.115	3.009	2.909	2.815	2.727	2.644	2.567
86	2.928	2.830	2.739	2.652	2.571	2.495	2.423
87	2.775	2.685	2.599	2.519	2.443	2.372	2.304
88	2.683	2.597	2.515	2.429	2.366	2.299	2.234
89	2.577	2.495	2.417	2.344	2.276	2.211	2.150
90	2.416	2.339	2.266	2.198	2.183	2.072	2.015
91	2.398	2.321	2.248	2.180	2.115	2.054	1.997
92	2.491	2.412	2.337	2.266	2.198	2.135	2.075
93	2.599	2.518	2.440	2.367	2.297	2.232	2.170
94	2.649	2.569	2.492	2.419	2.350	2.284	2.221
95	2.674	2.596	2.522	2.451	2.383	2.319	2.258
96	2.627	2.555	2.486	2.420	2.358	2.298	2.239
97	2.492	2.428	2.368	2.309	2.253	2.199	2.150
98	2.832	2.278	2.227	2.177	2.129	2.083	2.039
99	2.087	2.045	2.004	1.961	1.926	1.889	1.856
100	1.652	1.624	1.596	1.569	1.543	1.517	1.493
101	1.210	1.192	1.175	1.159	1.142	1.127	1.112
102	0.761	0.753	0.744	0.735	0.727	0.719	0.713
103	0.820	0.817	0.814	0.812	0.809	0.805	0.804

THE PRESENT VALUE OF ONE DOLLAR

Due at the end of any number of years to 100, at 4, 5, 6, 7
and 8 per cent interest.

Yrs.	4 per cent.	5 per cent.	6 per cent.	7 per cent.	8 per cent.
1	.96158346	.95238095	.94389628	.93457944	.92592593
2	.92455621	.90702948	.88999644	.87343878	.85733832
3	.88599636	.86383760	.83961928	.81629788	.79383224
4	.85480419	.82270247	.79209366	.76289521	.73502985
5	.82192711	.78352616	.74725817	.71293618	.68058320
6	.79031453	.74621540	.70496054	.66684222	.63016963
7	.75991781	.71068133	.66505711	.62274974	.58349040
8	.73069020	.67683936	.62741237	.58200910	.54026888
9	.70258674	.64460892	.59189546	.54398374	.50024897
10	.67556417	.61391825	.55839478	.50834929	.46319349
11	.64958093	.58467929	.52678753	.47509280	.42888286
12	.62459705	.55683742	.49696936	.44401196	.39711376
13	.60057409	.53082135	.46883902	.41496445	.36769792
14	.57747593	.50506795	.44230096	.38781724	.34046104
15	.55526450	.48101710	.41726506	.36241602	.31524171
16	.53390818	.45811152	.39364628	.33878460	.29189047
17	.51327325	.43629669	.37136442	.31657439	.27026895
18	.49362812	.41552065	.35084379	.29586392	.25024903
19	.47464242	.39573896	.33051301	.27650833	.23171206
20	.45683695	.37658948	.31180478	.25841900	.21454821
21	.43883360	.35894236	.29415540	.24151809	.19865575
22	.42195539	.34184987	.27750510	.22571817	.18394051
23	.40572633	.32557131	.26179726	.21094688	.17081528
24	.39012147	.31066791	.24697855	.19714662	.15769934
25	.37511680	.29580277	.23299868	.18424918	.14601790
26	.36068923	.28124073	.21981003	.17219549	.13520176
27	.34681657	.26784832	.20736795	.16098087	.12518682
28	.33347747	.25509364	.19563014	.15040221	.11591372
29	.32065141	.24294632	.18455674	.14056282	.10732752
30	.30881867	.23137745	.17411013	.13136712	.09937733
31	.29646026	.22035947	.16425484	.12277801	.09201605
32	.28505794	.20986617	.15495740	.11474113	.08520005
33	.27409417	.19987254	.14618622	.10723470	.07888893
34	.26355209	.19035480	.13791153	.10021984	.07304531
35	.25341547	.18129029	.13010522	.09866294	.06763454
36	.24366872	.17265741	.12274077	.08753546	.06262458
37	.23429685	.16443563	.11579318	.08180884	.05798572
38	.22528543	.15660536	.10923885	.07645686	.05369048
39	.21662061	.14914797	.10305552	.07145501	.04971341
40	.20828904	.14204568	.09722219	.06678083	.04608093
41	.20027792	.13528160	.09171905	.06241157	.04262128
42	.19257493	.12883962	.08652740	.05832357	.03946411
43	.18516820	.12270440	.08162962	.05451268	.03654084
44	.17804635	.11686133	.07700908	.05094643	.03383411
45	.17119841	.11129651	.07265007	.04761349	.03182788
46	.16461386	.10599668	.06853781	.04449859	.02900780
47	.15828256	.10094921	.06465881	.04158747	.02655661
48	.15219476	.09614211	.06099840	.03886679	.02486908
49	.14634112	.09156391	.05754566	.03632410	.02302693
50	.14071262	.08720378	.05428836	.03394776	.02182123

THE PRESENT VALUE OF ONE DOLLAR

Due at the end of any number of years to 100, at 4, 5, 6, 7,
and 8 per cent interest.

Yrs.	4 per cent.	5 per cent.	6 per cent.	7 per cent.	8 per cent.
51	.18530059	.08305117	.05121544	.03172688	.01974183
52	.13009672	.07909635	.04831645	.02965129	.01827952
53	.12509300	.07532986	.04558156	.02771148	.01692548
54	.12028173	.07174272	.04300147	.02589858	.01567174
55	.11565551	.06832640	.04056742	.02420428	.01451087
56	.11120722	.06507276	.03827115	.02262083	.01343599
57	.10693002	.06197406	.03610486	.02114096	.01244073
58	.10281733	.05902291	.03406119	.01975791	.01151920
59	.09886282	.05621230	.03218320	.01846533	.01066592
60	.09506040	.05353552	.03031434	.01725732	.00957585
61	.09140423	.05098621	.02859843	.01612934	.00914431
62	.08738868	.04855580	.02697965	.01507321	.00846696
63	.08450835	.04624600	.02545250	.01408711	.00783977
64	.08125803	.04404381	.02401179	.01316553	.00725905
65	.07813272	.04194648	.02265264	.01230423	.00672184
66	.07512760	.03994908	.02137041	.01149928	.00622346
67	.07223809	.03804670	.02016077	.01074699	.00576247
68	.06945970	.03623495	.01901959	.01004392	.00533562
69	.06678818	.03450948	.01794301	.00988654	.00494039
70	.06421940	.03286617	.01692737	.00877275	.00457443
71	.06174942	.03130111	.01596921	.00819883	.00423558
72	.05937445	.02981058	.01500530	.00766246	.00392184
73	.05709081	.02839108	.01421254	.00716117	.00363133
74	.05489501	.02708908	.01340806	.00669269	.00336234
75	.05278367	.02575150	.01264911	.00625485	.00311328
76	.05075353	.02452524	.01198313	.00584565	.00288267
77	.04880147	.02335737	.01125767	.00546323	.00266914
78	.04692449	.02224512	.01062044	.00510582	.00247142
79	.04511970	.02118582	.01001928	.00477179	.00228385
80	.04398433	.02017698	.00945215	.00445962	.00211885
81	.04171570	.01921617	.00891713	.00416787	.00196190
82	.04011125	.01830111	.00841238	.00389520	.00181657
83	.038565851	.01742963	.00793621	.00364038	.00168201
84	.03708510	.01659965	.00748699	.00340222	.00155742
85	.03565575	.01580919	.00706320	.00317965	.00144205
86	.03428726	.01505637	.00666340	.00297163	.00133523
87	.03296552	.01433940	.00628622	.00277723	.00123633
88	.03170050	.01365657	.00593040	.00259554	.00114475
89	.03048125	.01300626	.00559472	.00242574	.00105995
90	.02930890	.01238691	.00527903	.00226704	.00098144
91	.02818163	.01179706	.00497923	.00211873	.00090874
92	.02709772	.01123530	.00469743	.00198012	.00084142
93	.02605550	.01070028	.00443154	.00185058	.00077910
94	.02565337	.01019074	.00418070	.00172952	.00072138
95	.02408978	.00970547	.00394405	.00161637	.00066795
96	.02316325	.00924331	.00372081	.00151063	.00061847
97	.02227235	.00880815	.00351019	.00141180	.00057266
98	.02141572	.00838395	.00331150	.00131944	.00053024
99	.02059204	.00795471	.00312406	.00123312	.00049096
100	.01980004	.00760449	.00294728	.00115245	.00045459

CHARTER PERPETUAL.

THE MUTUAL BENEFIT



LIFE INSURANCE CO

AUGUST 1, 1858

OFFICE, 151 MARKET STREET, NEWARK,
AGENCY 11 WALL STREET, NEW-YORK.

Net Accumulation, August 1, 1858.	\$2,877,554
Total Amount of Dividends, paid to date,	1,078,950
Total Amount of Claims by Death, paid,	1,854,750

This Institution is PURELY MUTUAL, the entire accumulation being from premiums paid by members, since the commencement of its operations on the 1st of May, 1845.

The plan of business adopted by the Company, is such as to afford the insured all the aid possible in the payment of premiums, consistent with PERFECT SECURITY. The success attending its operations, shows conclusively the popularity of the plan, and the excellent management of its affairs.

This Company offers superior advantages, among which is its system of redemption of dividends, to aid the insured in payment of premiums.

Dividends are made annually. The business of the Company is very economically conducted.

Prospectuses, Statements and Applications will be furnished upon application at the office; all information will be given by the undersigned.

Directors and Officers.—ROBERT L. PATTERSON, CHARLES S. MACKNET, LEWIS C. GROVER, JOSIAH O. LOW, HENRY McFARLAN, ISAAC H. FROTHINGHAM, EDWARD A. STRONG, JOHN R. WEEKS, ANDREW S. SNELLING, RANDALL H. GREENE, JOEL W. CONDIT, NEHEMIAH PERRY.

ROBERT L. PATTERSON, President.
BENJAMIN C. MILLER, Sec'y. JOEL W. CONDIT, Vice-President.

JOS. P. BRADLEY, Mathematician.
LEWIS C. GROVER, Attorney and Counsel.
JAMES STEWART, M.D., Medical Adviser, N. Y.
JOSEPH B. JACKSON, M.D., Medical Adviser, Newark.



JUL 18 1946

Full
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